The Croonian Lectures

ON THE

PROGRESS OF DISCOVERY RELATING TO THE ORIGIN AND NATURE OF INFECTIOUS DISEASES.

Delivered at the Royal College of Physicians, London,

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LECTURE I.

THE ETIOLOGY OF INFLAMMATION.

GENTLEMEN,—The task which I have undertaken—that of giving an account of the progress of knowledge relating to the origin and nature of infectious diseases (and of late this has come to mean *acute* diseases), and the growth of this knowledge during the twenty years which have elapsed since I entered on the study of the subject—is one which I feel myself incompetent to discharge in a manner which will be satisfactory either to myself or to my audience. But the desire of the President that I should attempt it was conveyed to me in such terms by Sir Henry Pitman that, although I should rather it should have been undertaken by a younger man, refusal seemed difficult, and at once became impossible when enforced by the direct command of the President. It is in obedience to this command that I come before you once more as a lecturer. I accept the task with gratitude. I think I may say with truth that I was once a working pathologist. The game is now in other hands. The time must come to all of us when we must give up to younger men the real work of investigation, and find our pleasure (as happens constantly to me) in being instructed by our own pupils in the very branches of knowledge the elements of which we have ourselves taught them.

I trust that it will be understood that I do not intend to lecture here on bacteriology, and that these lectures are not intended for bacteriologists. My subject will be infective diseases and their causes. Of "microbes" or "micro-organisms" I shall speak, not as plants, but as exciters of disease, and deal with them as they are known to the experimental pathologist, not as they are curiously contemplated by the naturalist. My main purpose will be to show that, notwithstanding the apparent revolution which has taken place in our science in consequence of the discoveries of the past generation, the very ideas which are now dominant, especially those which have the best claim to acceptance, are, in so far as they are true, developments of ideas which were present to the minds of thinking, working pathologists a quarter of a century ago. The present course consists of four lectures, but the subject more naturally divides itself into three than into four. I shall therefore devote the first three to two subjects—namely, (1) the causes of acute diseases and their mode of operation; (2) the reaction of the organism (of man or of the higher animals) against the operation of morbific agents. The fourth lecture will relate to specificity—i.e., the relation between the distinctive characters of specific diseases and those of the specific causes which produce them. It will be my aim to direct the attention of those who may do me the honour of attending the lectures rather to the great pathological questions which now occupy the thoughts of pathological workers than to details, which, however essential they may be as bases of inference, are difficult to seize upon in the course of a lecture—asking you to accept my assurance that, when the time comes for publication, I shall state these details fully in the form of notes or appendices.

To-day I propose to discuss the etiology of inflammation—i.e., the mode of action of those microphytes, although morbific, which do not produce the diseases commonly called zymotic. I begin with the etiology of inflammation, because the doctrine of inflammation has ever been the pivot upon which pathological doctrine on other subjects has turned. Another reason is, that when I last had the honour of addressing the College the etiology of inflammation was my subject. Since that date large additions have been made to our knowledge. Much that was then surmise is now certainty, and many of the conclusions which had then been drawn from the results of experimental investigation have since acquired a wider meaning. I trust, however, I may be able to show you that, on the whole, the view of the subject which I then presented (substantially the same as that which I had given in my article in Holmes' "Surgery" in 1871) is the true one—that it requires to be extended rather than corrected. The definition of inflammation which I then gave—namely, that it is the response of living tissue to injury—still holds good, and probably will in all future time express what is meant by the word in pathology. In defining a morbid process it is not only necessary to set forth those characteristics, which are well ascertained and constant, but to draw attention to those which are as yet subject to question or require further investigation. The use of the words *injury* and *reaction* suggests three questions, all of which are fundamental. What is the nature of the reaction and what of the damage which produces it, and what are the external causes or noxæ of which the damage is the expression? These are the old questions which we have been asking ever since Simon discussed the subject in the first edition of the work I have referred to in 1860.

Noxa, Damage, Reaction.—In this climax it is the first step which at this moment specially concerns us; but we cannot discuss the agent except in relation to its effects. The etiology of inflammation cannot be considered irrespectively of the process.

PART I. *Origin and Development of the Doctrine of the Infective Nature of Inflammation.*—Up to the year 1860—that is, ten years before the beginning of the period to which these lectures specially relate—it was assumed without question that whenever inflammation occurs in consequence of an injury, whether chemical or mechanical, the *apparent* cause of the morbid process is the real one. Since that time it has gradually become clear that in the majority of instances this is not so; and that, however direct and simple may be the relation between the damage done and the reaction which follows, the result does not occur unless there be present at the seat of injury another condition—something analogous to the contagia which are the acknowledged indispensable agents in the production of specific diseases. So that in all these cases we have to distinguish between the contagium or proximate cause and the mechanical or chemical injury by the coöperation of which it is enabled to act. Now, the pathologist who first referred to contagium as an element in the causation of inflammation was John Simon. In the article[1] to which I have referred he adduced many striking facts derived from clinical experience as reasons for believing that it is "a generic and essential property of inflammation that its actions (or some of them) are always, in their kind, to some extent contagious." The most important of these facts were the readiness with which conjunctivitis can be produced by the introduction into the conjunctival sac of any kind of inflammatory product where there is no mechanical or chemical irritation, the production of disseminated inflammations by intravenous injection of perfectly healthy pus, and in general all those cases in which traumatic inflammations—such, for example, as that produced by running a splinter of clean wood into the finger—give occasion to inflammation of the corresponding lymphatic glands. All such instances seemed to Mr. Simon to indicate that even non-specific, clean, uncontaminated inflammations are more or less spreading or contagious. It was, however, clear to him that, even were it admitted that the property of contagiousness is generic, there must be a difference between common and specific, and he endeavoured, in so far as was then possible, to indicate its nature, referring particularly to the much greater dependence of specific contagia on individual proclivity and susceptibility, and to that antagonism between pus corpuscles and specific contagia which has of late years received its recognition in the phagocyte theory of Metchnikoff. In 1870 Mr. Simon, in republishing the article from which I have quoted, recognised in a note the probability that the doctrine which had a little before been set forth by Professor Hallier that specific "contagia are in their essence living microphytes," was true. In my own essay "on the process of inflammation," which formed part of the article "Inflam-

[1] See article Inflammation in System of Surgery, vol. i., pp. 26-29.

mation" in the same edition of the "System of Surgery," I differed from Mr. Simon in not regarding contagiousness as a property of common inflammation, but as distinctive of certain inflammations to which, on this ground, I applied the term "infective," or "secondary." As to the nature of the infective element contained in the exudation-products of such inflammations, I was unable to say more than that they consisted of "particles of matter of the nature of which we can assert nothing except that they are of extreme minuteness, are conveyed from a primarily inflamed part to other parts previously healthy, and there become foci of infective induration or suppuration, each of which is the product, if one may be allowed the expression, of a single seed."[2] But at that very time we were on the eve of great advances of knowledge. The next year a very extensive series of researches was conducted by Dr. Klein and myself, relating to what we then called "secondary inflammations," in which we observed the fact that the presence of micrococci in groups or chains, as well as rod-like microphytes, was so characteristic of all such suppurations, that we had no doubt that it was to them that these products owed their infecting character. As to the morphological characters of these microphytes we had no means of judging; they were designated as chains or groups of spheroids.

During the next few years many investigations, chiefly experimental, were made which served to throw light on the part played by microphytes in the causation of inflammation. In 1873, Chauveau made an experiment, of which I gave a detailed account in my former lecture, which was of fundamental importance. The operation of *bistournage* which is used in France for economic purposes as a means of arresting the circulation in the testis by torsion of the spermatic artery, and annulling the function of the organ in animals destined for the shambles, is never known to be followed by any inflammatory reaction, notwithstanding that the part is subjected to considerable violence. But if the animal is "prepared" by intravenous injection of microphytes derived from the pus of an infective abscess, the contamination of the blood which the organs contains at the moment that its circulation ceases, converts the ordinarily harmless manipulation into one fraught with danger to life in consequence of the intensity of the local reaction which it produces. Subsequently Professor Kocher of Berne showed still more conclusively that the most severe injuries of bone—such, for example, as the destruction of the medulla by the actual cautery, or the introduction of caustic potash or croton into the medullary cavity—produced no suppuration under normal conditions, but that this effect might be determined at will by subjecting the animal to what might be called a septic regimen—i.e., feeding it on putrid food. These and other similar facts served to make it extremely probable that organisms which, in the absence of the more exact knowledge which we now possess, we designated septic, were also at the same time "phlogogenic," i.e., possessed the power of determining suppurative inflammation when it would not without their intervention have occurred. But no proof was at that time given that they were capable of themselves of producing inflammation, or that they could exercise this power when separated from the inflammatory products in which they had vegetated. As regards the organisms which, under ordinary conditions, infect the common media of our environment, in the suspended moisture of the atmosphere, and the moist surfaces of all exposed objects which have not been sterilised, they had indeed been shown to be not only not morbific, but wholly innocuous. Wesener, in a research of which I also gave an account in my former lecture, showed that cultivating-liquids charged with these ordinary saprophytes could be injected in large quantities into the peritoneal cavity without producing any reaction whatever, provided only that the quantity so introduced was not too large to be disposed of by the efficient mechanism for absorption with which the peritoneal cavity is provided. On the other hand, it was found that if water were introduced into the peritoneum in such amount that it remained unabsorbed for several hours, death occurred from septic peritonitis, although no putrescible liquid had been used. Why this happens is easy to understand. The liquid becomes by diffusion charged with the soluble constituents of the blood, so as to resemble diluted serum, a liquid more suited for the rapid development of septic organisms than serum itself. The result is that the animal dies very rapidly of septicæmia. A process of inflammation is set up in the peritoneum, the surface of which is found at death to be lined with false membrane, while its cavity contains a fluid which is charged with leucocytes and teems with septic organisms, which last also plug the lymphatics of the diaphragm and are found in numbers in the circulating blood. The inference to be drawn from these facts is obvious; but I do not know that even now the facts are so thoroughly impressed on the minds of pathologists as their importance demands. May I repeat that inference in the same words I used ten years ago. "Air enclosed in a serous membrane is harmless, water is harmless, septic organisms are harmless, provided that they are rapidly absorbed. The one thing fraught with danger is that liquid which is undergoing the process of putrefaction should remain in a cavity which, although it is *inside* of the body as regards temperature, is yet *outside* in so far as it is beyond the reach of living tissue." In order that "germs" may have the opportunity of doing their fatal work there must be, in contact with the living tissue, non-living soil in which they can vegetate. Ordinary saprophytes are not themselves toxic, but act by the toxical products to which they give rise in the soil in which they grow; if that soil is wanting, the products cannot be developed.

I have now brought you, as regards the question of the dependence of inflammation on microphytes, almost to the point which had been arrived at at the date of my last lecture. In certain cases there was strong reason for believing that the origin of the process of inflammation was microphytic; but, on the other hand, it was certain that although the essence of the antiseptic treatment was supposed to consist in the exclusion of air-borne germs, such germs were, in themselves, absolutely harmless. The only way of reconciling these apparently contradictory principles was to be found in the hypothesis that among the organisms grouped together under the general term septic or non-specific, there were some which were endowed, not merely with the faculty of determining sepsis, and therefore capable of producing septicæmia if brought into relation with exuded liquid or effused blood enclosed within a living tissue, but were possessed of the power of injuring and damaging protoplasm. In support of this hypothesis the only facts were those which were derived from certain forms of infective inflammation, which I at that time designated to you as "cryptogenetic," a term which I borrowed from the late Professor Hüter. The term is one which does not need explanation. The type of such inflammations is the primary inflammation of the marrow or spongy tissue of bone, to which young people are liable without any assignable cause, and which in too many cases gives rise to, or is associated with, secondary foci of inflammation, either in other parts of the skeleton or in internal organs, attended with the constitutional symptoms of pyæmia. Another typical case of infective or disseminated inflammations coming into existence "cryptogenetically" is that in which pyæmia supervenes on valvular disease, without its being possible to suppose that any infective material has been introduced from without. Now in these two cases the secondary lesions are of the same nature, though they differ in distribution, the most characteristic being the miliary abscesses, each surrounded by a border of hyperæmia, which are found in the medullary and cortical part of the kidneys, and appear to be due to the plugging of minute arteries. As regards all these secondary foci, whether their embolic origin could be made out or not, it was ascertained some fifteen years ago that they were characterised by the presence of aggregations of spheroidal microphytes, which ever since Hallier we call cocci, and which under the microscope were clumped together in groups or colonies, which did not exhibit any definite arrangement. Considering that in these cases the microphytes in question must have come into existence and have grown under very special conditions, and that, however simple their morphological characters were, they were remarkably uniform, and that the pathological appearances were such as to indicate that they acted not merely as foreign bodies, but possessed the power of exercising an injurious or disintegrating influence on the elements of living tissue with which they came into relation, pathologists thought it reasonable to attribute to them *special* pathogenic properties differing from those of ordinary saprophytes. Had I been asked in 1880 to define my position, I should have said those inflammations which are most characteristically infective are associated with organisms which, so far as we can make out, are *peculiar*—i.e., are not

[2] Holmes' System of Surgery, ed. 1871.

ordinary saprophytes. Are they specifically phlogogenic? This question we could not answer then; we can now.

PART II. *Discovery of the Specific Forms of Phlogogenic Microphytes.*—Such, then, was the knowledge we possessed up to the year 1880, and now we come to a new departure in the history of our subject. This new departure consisted, first, in the demonstration that in all ordinary cases of acute suppurative inflammation, whether infective in the sense used by me in 1872 or not, the purulent product contains microphytes which are special to it; and secondly, in the application of the methods with which about that time Dr. Koch had enriched pathology for separating species of microphytes from each other and obtaining pure cultures. It is gratifying to say that we owe the demonstration that all acute inflammatory products contain characteristic forms of microphyte to an English, or rather Scottish, pathologist, Professor Ogston of Aberdeen.[3] For the working out of the phytological characteristic of Dr. Ogston's organism we are no less indebted to Professor J. Rosenbach of Göttingen. The two researches may be referred to in connexion with each other, provided that it is borne in mind that Ogston was first in the field. Ogston found that in the pus of acute abscesses the spheroidal microphytes, which are always present, are partly in chains or chaplets, and partly in collections, in which the grouping of the individual spheroids resembled that of fish roe, or that of grapes in a bunch. This comparison led him to adopt as a name for the organism the term "Staphylococcus," which may be conveniently Englished as "Cluster-coccus." He further found that in sixty-four acute abscesses, all contained micrococci of some sort, seventeen contained only chains, thirty-one only clusters; in the rest both were present. Both of these organisms were found to be capable of producing localised inflammation resulting in abscesses when liquids containing them were injected subcutaneously; but it appeared that the character of the abscess differed in the two cases, the cluster-coccus producing a well-circumscribed abscess, whereas the chaplet-coccus (which, following Billroth, he called "streptococcus") always found its way from the inflammatory focus into the lymph paths leading from it. Nothing can be more interesting than the description which Ogston gives of the structure of a typically limited abscess in its early stage—i.e., four days after the subcutaneous injection of a drop of the cluster-coccus culture. A nodule exists under the skin of which the centre is yellow pus; then comes the pyogenic membrane, infiltrated with leucocytes and invaded by masses of staphylococci; and outside of this a zone of injured tissue, in which the elements have lost their distinctness but scarcely any microphytes are to be seen.

That so accomplished a pathologist as Dr. Ogston was able to make himself sure of the fundamental fact—i.e., the existence of cocci in all acute abscesses—and to state numerically the prevalence of each in the cases which came under his observation, was due to his having taken the trouble to make himself master of the best technical methods which were then known. In like manner, Rosenbach's[4] success in investigating the generic characters of staphylococcus and the distinctions of the two species, *aureus* and *albus*, would not have been achieved had not Koch discovered the method of culture on solid media. A staphylococcus culture can be obtained by sowing pus in which it is growing on the surface of a suitable solid medium, solution of meat peptone, to which agar enough has been added to enable it to gelatinise, and remain solid at the temperature of the body. This is effected by streaking the surface with a sterilised platinum loop which has been charged with pus. In twenty-four hours a linear opacity shows itself in the position of the scratch, which soon acquires the appearance of a streak of yellow paint. If the staphylococcus were sown on nutrient jelly instead of on agar, it would liquefy it, so that in a short time the yellow crust would fall to the bottom. Staphylococcus is one of those microphytes which does not want air, and will grow without it, but requires oxygen for the development of its characteristic colour. It is capable of digesting cooked meat and converting it into peptone, but it has a tendency to produce the ulterior chemical changes which are characteristic of putrefaction. The cocci are very minute, so that although we used to be able to make them out in pre-Kochian days, we could never be quite sure what we were looking at. There is no difference between the two species of cluster-coccus either as regards the size or grouping of the organism. The only distinction between them is that one is in mass golden yellow, the other opaque white. Such is the *primâ facie* case established in 1883 by Rosenbach in favour of the yellow cluster-coccus, or, as it was also at that time called, the osteomyelitis coccus. The reason why it received the latter designation was that about the same time that Rosenbach was working with it Dr. Becker published a preliminary communication, in which he gave that name to a micrococcus which he had obtained in a state of pure culture from the pus of infective or dyscrasic osteomyelitis, and which he regarded as the specific cause of that disease. So that although Rosenbach appears to have been the first to recognise the causal relation of the microphyte to suppuration, Becker has a fair claim to be regarded as a discoverer, inasmuch as his description was the one first published. It was not, indeed, until 1884 that Rosenbach's well-known monograph was published. But in the meantime the *clinical* fact of the almost constant presence of the microphyte in the products of acute inflammation, and the *experimental* fact that it is capable under favourable conditions of producing localised suppuration, had been accepted with even too much confidence as well-established facts in pathology. At that time the question of the etiology of suppuration identified itself with that of the pathogenic properties of staphylococcus, almost as completely as if the relation between it and the process of inflammation were no less specific than that which subsists between anthrax and the bacillus which causes it. What we have now therefore to do is to inquire what the real value of the clinical and experimental facts I have referred to is. We shall find that the question is by no means so simple as at first it seemed, and that, although during the seven years which have elapsed since Rosenbach's book appeared, the literature of the subject has assumed very large proportions the question of the true relation between process and microphyte has scarcely even yet been fully elucidated. Before we proceed to the examination of this evidence, I must remind you parenthetically that, although the cluster-coccus is the most important of the microphytes which appear to have to do with the suppurative process, Rosenbach designated three other organisms, in addition to streptococcus, as having subordinate claims. But it will be most conducive to the purpose we have in view to confine ourselves as far as possible to the pathogenic properties of the yellow cluster-coccus, bearing in mind that no sort of microphyte has any interest for us whatever, excepting in so far as it can be proved a mischief-maker. We regard these things not as naturalists, but as pathologists.

PART III. *Lesions produced by the Cluster-coccus.*—In the order of time, the first investigation which deserves mention is that of Krause,[5] who confirmed Rosenbach as to the identity of the cluster-coccus of common suppuration with that of infective inflammation of bone. His excellent experimental results were also of interest, but need not be referred to specially, because they were covered by those made subsequently by others. Next followed the research by Dr. Rodet of Paris, by which the yellow coccus was introduced to the notice of French pathologists. His point of departure was also osteomyelitis, and his purpose to determine whether or not a disease really analogous to idiopathic or cryptogenetic suppuration of the marrow in man could be produced by the introduction of the microphyte into the circulating blood. In this he was so far successful that in those of his experimental animals which survived the immediate effects of the injection, suppurative foci presented themselves in the long bones, particularly the femur and tibia, which in their localisation and character resembled those of idiopathic osteomyelitis in man.[6] M. Rodet's results as to the production of osteomyelitis by the intravenous injection of the yellow cluster-coccus and the resemblance of the disease so produced to infective myelitis in man, have been confirmed by later observers, particularly by MM. Lannelongue and Achard.[7] These pathologists find that, although, when osteomyelitis is produced by the infusion into the circulation of cultures of

[3] Ogston. Report on Micro-organisms in Surgical Diseases. Brit. Med. Jour., 1881, p. 369.

[4] Rosenbach: Die Mikro-organismen der Wundinfectionskrankheiten der Menschen. Wiesbaden, 1884.

[5] Krause: Die Mikrokokken der Osteomyelitis. Fortschritte der Medicin, 1884, ii., p. 221-261.

[6] Dr. A. J. Rodet: De la Nature de l'Ostéomyélite Infectieuse: Production d'Ostéites Épiphysaires par l'Injection des Liquides des Cultures sans Traumatisme Osseux. Revue de Chirurgie, 1885, pp. 273 and 696.

[7] Lannelongue et Achard: Étude Expérimentale des Ostéomyélites à Staphylocoques et à Streptocoques. Ann. de l'Institut Pasteur, vol. v., p. 209. 1891.

staphylococcus, it may begin superficially—i.e, under the periosteum,—it usually begins in the medulla or spongy tissue, a favourite seat of origin in animals not fully grown being the lower end of the femur at the junction of the diaphysis with the epiphysis; so that when, as in some of Rodet's experiments, the most obvious lesions are arthritic, the joint affection is found to be dependent on disease of subjacent bone. Thus the cluster-coccus might reasonably enough be called the myelitis-coccus, were it not that occasionally it kills by infecting the kidneys and other viscera without harbouring in the bone marrow. Among the earlier experimental investigations which were made during the years which immediately followed the publication of Rosenbach's work, few were more satisfactorily carried out than that of Dr. Lübbert of Würzburg,[8] as regards the care bestowed on the clinical, bacteriological, and anatomical parts of the inquiry. Pure cultivations of staphylococcus were for the most part derived from osteomyelitis, for the idea of its specific relation to that disease still had its weight. Sterilised salt solution in which pure colonies of staphylococcus were suspended so as to form an opalescent liquid were introduced either into a serous cavity or into a vein. If the peritoneum was the channel employed, the injection killed the animal in a few hours; or if it survived the immediate effect of the injection, gave rise to secondary inflammations of internal organs, both of these effects being of course due to the entrance of the microphytes into the circulation through the lymphatics. The nature of the infective lesions and the fate of the organism in the circulation could be better studied after injection of the diluted culture into the venous system. Lübbert found that whereas shortly after the injection the microphytes can be readily detected in the blood, they are not many hours in disappearing entirely, and are then found in numbers in the urine. Still later they are neither forthcoming in the blood nor urine, and Lübbert concluded that most of them had been eliminated by the kidneys from the body. Of the small minority that remain there are, however, quite sufficient to do mischief. In the kidney, which in cases of infective endocarditis and osteomyelitis in man we have seen to be the favourite seat of secondary foci, the appearances are as follows:—On stripping the capsule, yellowish patches, more or less prominent, are seen on the external surface of the organ, while in section the cortex shows nodules of various sizes, most of them miliary. Of these grey spots some are obviously abscesses, but the most minute are glomeruli, of which the afferent arteries and capillaries are choked with micrococci, these organisms also occupying the space between the tuft and the capsule. Here and there spots of necrotic tissue are met with surrounded by a zone of purulent infiltration, and it is then seen that the micrococci occur both incorporated in the pus-corpuscles and in the intercellular liquid. In the medullary part the linear streaks are chiefly due to plugging of the uriniferous tubes with cocci. Sometimes a vein is beset with cocci which penetrates into its wall. In the heart there are opaque nodules as large as pin heads, some of which are superficial—that is, subjacent to the serous membrane or endocardium; others disseminated in the muscular substance. Each is surrounded by a zone of hyperæmia, beyond which the muscular fibre exhibits signs of degenerative change. These minute abscesses are for the most part in relation with emboli in capillary arterioles. As regards the medulla of bone, Dr. Lübbert added nothing to the observations of Rodet as to the development of osteomyelitis, and was indeed unable to confirm them. But that question has, as I have already stated been completely settled since by Lannelongue. The sketch that I have given will at least serve to indicate the two directions in which it was necessary to investigate the pathogenic action of our microphyte. Its local action shows itself wherever it is introduced into the body, human or animal—in the peritoneum, in the cornea, in the subcutaneous tissue. Its general action shows itself in the internal organs, to which it finds access exclusively by the blood stream.

I will first ask your attention to the changes which result from the local action of the cluster-coccus as observed in the cornea and subcutaneous tissue; in respect of which I will refer to a series of very valuable researches lately carried out in the Pathological Institute at Bonn, under the direction of Prof. Ribbert; to the important paper of Dr. Hess which emanates from another centre of pathological work, Prof. v. Recklinghausen's Laboratory at Strasburg, recently published in Virchow's *Archiv;* and to an equally important investigation by Dr. Hohnfeldt contained in the third volume of Ziegler's *Beiträge.*

Staphylococcus in the Cornea.[9]—The cornea can be best infected by introducing the undiluted culture into the wound made by a needle. The microphyte grows into the corneal tissue as it does in any other suitable medium, the only difference being that the colony assumes a form which is determined by the structure of the tissue. It consists for the most part of a system of subordinate colonies, which are arranged more or less distinctly in rows or tracts which branch from a central tract, but take their direction from that of the tissue, the whole forming a continuous system which has the puncture as its starting point. So much can be seen by examination with low powers. On more minute investigation it is found that each mass is sharply defined, and that it is surrounded by a zone of altered tissue, in which, if the preparation has been stained, the corneal tissue is relatively pale, and the corneal corpuscles appear to be wasted. The paleness is chiefly owing to change in the nuclei, which not only stain less, but are less sharply defined. It is easy to recognise in this zone the atrophic state which was described by Cohnheim in 1877, as the first stage in trigeminal keratitis. It can be observed distinctly eighteen hours after infection. About this time the migration of leucocytes goes on so rapidly that by the end of the first day the zone of atrophy is bordered by an outer zone of infiltration. The leucocytes are most abundant at the junction of the two zones; here, indeed, they are closely packed, but further from the colony they run in tracts corresponding to the lymph spaces of the tissues. The elements themselves show signs of disintegration in the neighbourhood of the atrophic region, but are elsewhere normal. The result of the process so begun is that the whole of the tissue which is infected by the cluster-coccus, and which corresponds in extent to half the cornea or more, is destroyed; in other words, that a corneal ulcer is formed, on the floor or surface of which the micrococci have mostly disappeared. At the edge of the ulcer the epithelium shows the signs of reparative growth (that is, it is thicker than normal), and many of the cells exhibit karyokinesis), while in the subjacent corneal tissue the reparative process is going on at the same time in the way also described by Cohnheim. The Bonn pathologists have, however, no doubt that in this process the nuclei which are seen in karyokinesis in the corneal tissue really belong to the fixed corneal corpuscles. In these facts we have the clearest evidence that the cluster-coccus is able to vegetate in the cornea, and thereby damage its structure, and that this damage is followed by the normal reaction—i.e, the immigration of myriads of leucocytes. Why do these leucocytes appear on the field? Metchnikoff says that they appear there for the purpose of devouring the microphytes. As to the fact that they do incorporate them, there is no manner of question. This point was not specially studied by the Bonn pathologists, but has been thoroughly worked out by Dr. Hess, whose observations are positive on the subject. The question what this means—that is, whether any such teleological meaning is to be attached to it—we shall have to discuss in a future lecture.

Staphylococcus in the Subcutaneous Cellular Tissue.—For subcutaneous injection the cluster-coccus may be used in the form of an emulsion, obtained by diluting a pure culture with salt solution. In Hohnfeldt's[10] experiments the local effects were observed from four hours after injection. By the end of the third day the cocci had collected into colonies. Long before this many of them were incorporated, not only in leucocytes, but also in the epithelial lining cells of the capillaries. A little later a minute abscess had formed, and in its cavity exhibited obvious signs of degeneration, and the coccus vegetation extended beyond the zone of infiltration into the lymph spaces, but not to any considerable extent. The process of reparation did not begin until after the expiration of the first week. It was marked by the formation of new tissue—that is, of epi-

[8] Lübbert. Der Staphylococcus Pyogenes Aureus und der Osteomyelitis-coccus. Würzburg, 1886.

[9] Jacobs: Beitrag zur Histol. der acuten Entzündung der Cornea. (Inaug. Dis., Bonn, 1887.) Hess: Weitere Untersuchungen zur Phagocytenlehre (Virch. Arch., 1887, cx.).

[10] Hohnfeldt: Ueber die Histogenese der durch Staphylokokkeninvasion hervor gerufenen Abscessen. (Beitr. zur Pathol. Anat., von Ziegler und Nauwerck, 1888, iii., p. 343.)

theloid cells with large distinct vesicular nuclei and distinct nucleoli, immediately outside of the leucocytic infiltration. In these cells various stages of karyokinesis could be seen, particularly single and double stars, indicating great activity of germination. But it must be remembered that before this work of new growth, of reparation of damage, begins, the mischief-makers have disappeared. As in the case of the cornea, so here their work consists first in killing the living elements of structure within their reach; and secondly in determining the initial phenomena of the inflammatory process—that is, active congestion, exudation, and emigration. This accomplished, they disappear. So far from profiting by this influx of nutritive material, it seems to be in the highest degree unfavourable to their further development. Whatever be the proximate cause of this cessation of growth and disappearance, we may, I think, properly connect it, as we always have connected it, with the multiplication of leucocytes. We shall return to this question later.

Staphylococcus in the Kidney.[11]—We have seen (and the fact is familiar to everyone) that the favourite seat of secondary infective inflammatory foci in cases of osteomyelitis and of infective endocarditis is the kidney. Similarly, when our microphyte is introduced into the circulation, it is in the kidney that it localises itself. Twenty-four hours after the injection of a syringeful of staphylococcus emulsion the organ shows streaks of grey in the medullary part, which I have already described. These streaks are simply collections of cocci which have plugged the bloodvessels, whether arterial or venous it is difficult to determine. The cortex is beset with very minute dots not larger than poppy seeds, each of which represents a colony or group of colonies, many of which exceed the convoluted tube in width, and therefore must have grown *in situ*. Each is surrounded by a zone of spoiled tissue, and that by a zone of cellular infiltration, outside of which the tissue is normal. Later each of these colonies becomes a small abscess, around which you have the double zone; atrophy or necrosis inside, with cocci in the atrophied part; infiltration of leucocytes outside; then tissue showing signs of nuclear proliferation. Towards the end of the third day or later, these appearances become more distinct—that is, the abscess cavity is bounded by a zone of cellular infiltration, and that by a zone of nearly normal tissue, in which there may be karyokinesis of the epithelium of the convoluted and other tubes, as well as of other tissue elements, probably vascular, occupying the interstices between them. It is to be borne in mind that this unequivocal evidence of proliferation does not present itself until at least three days after infection, long after the cellular infiltration has attained its height, and consequently that it affords no evidence of causal relation between germination of tissue and pus formation. The order of process is therefore, first necrosis, secondly emigration, and lastly proliferation of fixed elements indicated by karyomitosis. We surmised this to be the case before; we *know* it to be so now.

Staphylococcus in the Lungs.[12]—For the study of the action of the cluster-coccus on a vascular tissue, the alveoli of the lungs afford advantages not to be met with elsewhere. For in the lungs the relations between fixed elements of tissue and those which emigrate from the bloodvessels are relatively easy to appreciate. In the rabbit there is no difficulty in introducing staphylococcus into the alveoli: all that is necessary is to inject an emulsion into the trachea with a subcutaneous syringe. What happens is this. You get an exquisite lobular pneumonia. In twenty-four hours the base of the lungs is beset with minute indurations, varying in size from that of a hempseed upwards, which are more or less confluent, and follow the course of the bronchi. In the indurated parts the alveoli are full of cells, which, I need scarcely say, are of two kinds—namely, small cells with one or more irregular-shaped nuclei (i.e., leucocytes), and larger epithelial elements distinguished by their vesicular nuclei. From the first these cells contain cocci. Both kinds take part in the process of incorporation, but the epithelial elements much more than the leucocytes. At first the leucocytes are very numerous, but later they find their way into the bronchial tubes, and the alveolar contents become more and more epithelial. Along with this occurs that process of coalescence by which in the lungs multinuclear or giant cells come into existence, all of which, like the smaller epithelial elements, contain incorporated cocci. What happens to these cocci? They all disappear, but before they disappear they die. The proof of this has been given by Lähr. By bringing a calcined platinum needle into contact with a freshly exposed surface of the inflamed lung, and streaking with it the surface of an agar plate, the characteristic colonies are obtained any time up to the third day after infection, but they become less and less abundant, until after the fourth day none can be obtained, however carefully or repeatedly the experiment is made. At this period cocci are still visible in the alveolar cells, but soon they dwindle and lose their characteristic uniformity of size and contour. I would ask your special attention to these observations because they serve to exemplify in a very remarkable way how the same process—that is, the action of staphylococcus on living tissue, may vary in its character according to the anatomical and physiological endowments of the tissue acted on. In the alveoli of the lung, they come into relation with a tissue in which the capillaries are protected only by a scanty covering of epithelium—in which active congestion and exudation and emigration can be excited with extraordinary facility—and the encounter between microphyte and cell occurs in the presence of oxygen. In the kidney there is no free oxygen, and the organisms appear in the first instance as capillary emboli. The want of oxygen is favourable to the vegetation of the microphytes, and accordingly a colony grows wherever a single coccus is deposited. By virtue of their aggregation the individual cocci are effectually protected from any influence of their environment which might tend to check their growth, and are enabled to exercise on that environment their own characteristic toxic influence, each colony surrounding itself, as we have seen, with a zone of necrosis. In other words, the microphytes are, within a limited sphere of action, in the majority; whereas in the lung, by disseminating, and because the presence of oxygen is unfavourable to their growth, they are in the minority. In the one case they die and rapidly disappear; in the other they hold their ground and become the centres of infective abscesses.

We have already seen that in the cornea, where for very similar reasons the cluster-coccus grows just as it does in a tube culture, each colony is surrounded by a necrotic or atrophic zone, just as it is in the kidney, and the immigration of leucocytes from the conjunctival border is an event subsequent and secondary to this damage. There is another case which not only serves to exemplify the same principle, but is in itself full of interest. The case I mean is that of infective endocarditis. By clinical observation we know that mitral valvular disease is associated with the presence of infective inflammation in other parts, and that, on the other hand, ulcerative endocarditis is antecedent to general infection. Recent researches have proved that in these forms of endocarditis our cluster coccus is more frequently concerned than any other; and it has now been shown experimentally that by introducing this microphyte into the circulation it is able to fix itself on the heart valves, and that, having done so, it is capable of destroying the epithelial lining and penetrating the sub-epithelial tissue. Why does it fix itself there rather than elsewhere on the internal surface of the vascular system? Probably because the surface is most remote from capillary bloodvessels—that is, from the influence of actively living cells. Be that as it may, it is important to note that the action of the cluster-coccus on the endocardium is the same as on the cornea. It grows slowly, but holds its ground. It slowly damages a tissue, which, when once spoiled, has no power of recuperation. I have now completed the case against staphylococcus. It has been proved that it is one of the most mischievous of microbes—in short, that where mischief is, there it is almost certain to be found, and that wherever it enters, mischief follows. Speaking more definitely, it has been shown that its primary influence is to impair and ultimately annul the vitality of whatever living tissue is brought within the range of its influence. It has further been shown that it induces in all vascular tissues congestion, exudation, and emigration of leucocytes (that is, the first stages of the process of inflammation; how it does so is a question to be discussed later), and that it is very readily incorporated in actively growing cells, whether epithelial or derived from the circulating blood. From the fact that in the lungs and elsewhere the infiltration of the tissue with leucocytes, and the abundant development in it of young cells, appears to be distinctly

[11] See Lübbert, loc. cit., pp. 74-102.

[12] Lähr: Ueber den Untergang des Staph. Pyog. Aur. in den Entzündungsprocessen der Lunge. (Inaug. Diss., Bonn, 1887.

connected with the absence of the destructive effects which are observed under opposite conditions, it may be fairly inferred that these processes are protective—that is, that although they are themselves constituents of a morbid process, they conduce to the destruction or elimination of the *materies morbi*. But in the facts before us to-day there is nothing to justify the conclusion that the incorporation of microphytes in cells is the chief or only way in which the human or animal organism exercises its protective influence.

In concluding to-day's lecture with these statements as regards staphylococcus, I must ask you to bear in mind that there are other organisms which stand in the same or in a similar relation to the process of inflammation. Of these I have to-day referred to streptococcus cursorily, as regards which it has been shown by a large body of evidence, clinical and experimental, that its action resembles staphylococcus in most respects. The question of the difference between them has been lately satisfactorily dealt with by MM. Lannelongue and Achard in the research to which I have already referred. The results to which they have come are these: The visceral lesions produced by the chain-coccus differ only in degree—i.e., in their being less intense, from those due to the cluster-coccus. Each is capable of producing osteomyelitis experimentally and may be the cause of it clinically. That two microphytes which are so easily distinguished in the laboratory should be almost undistinguishable in their action is a fact which evidently bears on the view to be taken of the relation between microphyte and its morbific action. This we shall have the opportunity of considering in relation to another phlogogenic microphyte, viz., the lung-coccus, which plays so important a part in several infective inflammations. The main question relating to the etiology of inflammation remains to be discussed. It may, I think, be admitted that either staphylococcus or some similarly endowed anærophyte is the proximate cause of all acute inflammations which are met with in practice. Is it the only cause? Or can suppuration be produced by other agencies independently of microphytic intervention? On this question I shall be able to present to you clear evidence in my next lecture.

AN APOLOGY FOR LECTURES.

SOME REMARKS INTRODUCTORY TO THE FIRST PART OF THE COURSE OF LECTURES ON MEDICINE AT THE WESTMINSTER HOSPITAL.

BY OCTAVIUS STURGES, M.D.

RECENTLY, in an evening paper, the *St. James's Gazette*, a correspondent wrote: "The London medical schools yesterday opened their doors to students, and forthwith each student's time, for about twelve hours each week, will be occupied by hearing lectures. Will some one of the lecturers explain why in these days, when books written by the ablest members of the medical profession are within reach of everyone, the students are obliged to spend time in obtaining information by hearing what, I venture to suggest, they could obtain more rapidly and efficiently by reading?" That shall be my text to-day. If the writer's contention be true—and he is not alone in his belief,—this, our first meeting, opens a dreary prospect of misspent time and futile effort both for you and for me. We may put out of view, indeed, such lectures as are also demonstrations, where the teacher has something to show as well as something to say—lectures on chemistry or practical physiology, for example, their use is obvious. The remarks I have just read refer to such a course as this we are now commencing, to lectures merely, with no more immediate illustration than the patients in the wards. So limited, let me try to answer the question, Are lectures—lectures in medicine, let us say—of any use?

There are some lines of defence for lectures which I shall not adopt. Every practice or institution finds defenders so long as it lasts. Slavery and bull-baiting and savage laws, many things which all now admit to be wrong, only ceased to be when the great majority declared against them. They survived for many years the condemnation of all enlightened men. So may it be with lectures. The reading of a well-worn manuscript in a monotonous voice with no ring of interest about it, by a seated professor who never really addressed his audience—a practice commoner thirty years ago than now—was understood to be a perfunctory and ceremonial observance. If it was of use at all, it was useful as a sort of discipline, bringing men together at a certain hour and for a certain time, like roll-call. Precisely so in my time at Cambridge a great Master of Trinity, it was currently reported, used to account morning chapel. In reply to defaulting undergraduates, who pleaded that in the circumstances they found prayer difficult, he would say, "You do not go to pray; you go to be 'marked.'" I shall not defend lectures on that ground.

The position, I say, is precisely that suggested by obsolete bad laws and cruel sports. Lectures in the past, many of them, are now admitted to have been useless, yet they survived and found defenders; they were, indeed, less cavilled at then than now. What is the proof that the lectures of the present are of any greater service? May it not be that we ourselves are actors and witnesses in a gradual process of transition which will end in the final extinction of formal lectures as a mode of teaching, insomuch that the student of the next generation will look upon us as sufferers under a blind routine in much the same way as we now regard the perfunctory chair lectures of the past?

That there does already exist, and has long existed, a certain feeling or sentiment which is apologetic in regard to formal lectures, if not opposed to them, can hardly be doubted. A movement of that sort, indeed, is so distinct and far-reaching that it has even stirred the General Medical Council. No one can mistake the spirit that breathes in the recommendation of that body that lectures upon any one subject are not to exceed three a week, as well as in the new meaning they have found for the word "practical." This subject of the practice of medicine, for example, that we are now beginning cannot be discussed, however cursorily, at the rate of three lectures a week in the six months devoted to it. The Medical Council is not likely to be openly revolutionary, but their plain hint is that lectures are of little use, except for getting "marked;" "practical work" is everything.

Now, against this spirit of the Medical Council, and in answer to the *St. James's Gazette* correspondent, I would maintain that the requisite information he speaks of is *not* "to be obtained more rapidly or efficiently by reading than by listening to lectures," and, what is more, that the student knows that it is not. Men come to lecture by choice, and because they find that coming contributes to the immediate object of their existence—namely, getting through, satisfying the examiners. What is the ground, you will ask, of such dogmatic assertion? It is this. Students, as a general rule, attend many more lectures than they need attend—more, I mean, than the minimum that entitles them to the lecturer's signature. Speaking from an experience of many years, I can say that that is always the case. There is, of course, a residuum—a small number who regard "cutting lecture" in the light of an accomplishment. We may safely neglect them, and we do. My point is that the number of those who attend the fewest times possible by the regulations is very small. The great majority come because they like it, and they like it (as could easily be proved by statistics if time served) because, as a matter of fact, it gets them through. Can any evidence in favour of lectures be more "practical" than that?

If you come to think of it, the statement that lectures are no better than books is against reason. I do not stay to speak now of what the lecturer does in collecting and weighing facts and opinions from many sources, and so saving the student's time while helping his judgment. The very same material that the lecturer uses is accessible to others, and he who has the diligence may legitimately prefer to read it for himself and in his own way rather than to hear about it. But the point raised is not met by any considerations of that sort. The contention is this: whatever facts or opinions you hear at a lecture you may read in a book or in books; therefore lectures are useless. I admit the premiss, but altogether demur to the conclusion. Fact for fact, word for word, it is a bold statement that oral learning has no advantage over book learning; for it effaces the Teacher. Now, it so happens that with all the activity of the press, with cheap literature and the multiplication of books and of readers in every department of human knowledge, instruction by the living voice has more than held its own. Lectures have increased in larger measure than books. The lecturer, so far from being effaced, was never in more

request than now. Oral teaching, indeed, from time immemorial has occupied a distinct place in education, and marks a step in the intellectual growth of everyone, be his profession what it may. The great distinction between school and college—you will not have forgotten it—is this. At school you learn out of a book, repeat the lesson or work the sum; but with the higher teaching comes the lecturer and oral demonstration. That there should be any other mode of education than this, whether general or technical—that from school the learner should pass into the closet, shut to the door, read his books in seclusion, and when perfect come forth to be examined—this has never been quite seriously proposed. When medical students talk so, it is partly their fun, as Charles Lamb said of Coleridge's metaphysics, and partly it is because lectures are so crowded together nowadays that there is small interval between. The modern student, hurried from field to field, has no time to ruminate, and yearns for the green pastures of reading and meditation.

But you will say, May not the book be the exact transcript of the spoken words? Is it not possible that the lectures themselves—the best of them, in the very phrase of the speakers—should be printed for our use, to be read at leisure and properly digested? Are there no such books available? Yes, there is one, and it was printed nearly fifty years ago. Sir Thomas Watson's Lectures given at King's College in 1837 were published in 1843, and revised in 1848. Although the boundaries of medicine have vastly extended since that day, these lectures may still be read with pleasure and profit. "Their colloquial and familiar style," as the author himself describes it, is at the same time so graphic as to bring before the reader the very image of disease. But a work of art of this kind does not bear being meddled with, and loses its chief charm in being brought up to date. We have no modern book of lectures on practical medicine, so far as I know, that ventures upon the ground once occupied by Watson and Latham and Todd. And observe that the great merit of these lifelike descriptions is to arouse a desire to see the thing itself. That is the object of lectures now; and although, as I have said, these lectures we are now commencing are without demonstration, yet they point directly to living examples. Our poor discourses are made as good as Sir Thomas Watson's, and better, because we have always at hand appropriate illustrations. We have not, indeed, actually in stock, so to speak, samples of all the diseases we discuss, but we have the elements, or constituent parts, of very many of them. Morbid symptoms and signs in great variety are always on view, and they give life to our meagre descriptions. The wards supplement the lecture room, and no vivid or enduring conception of medicine can be got without the help of both.

Two illustrations of this statement strike me at the moment. The lectures of Sir Thomas Watson, owing to their lucidity and avoidance of technical jargon, are favourite reading with intelligent men, and are especially consulted in family sickness. But I hardly ever knew of any lay reader who derived from that matchless book much workable knowledge, while sometimes the views gathered are grotesquely wrong. Again, men of our own profession, many of them of superior intelligence, who have got their practical knowledge mainly from books, and who, as it has happened, have not been in actual touch with disease, have not lived with it, their occupation being with science, however nearly allied to medicine, will often display an ignorance on plain matters of illness which to the humblest clinical student is surprising. It is true, no doubt, as I have said, that there is a way of lecturing, common in the past, perhaps not quite obsolete now, which robs discourse of all personality and succeeds in effacing the teacher. But the real, that is the honest, lecturer is a guide; he not only maps out the subject for you, but shows it in its light and shade. The book description is like the rough land or sea map that outlines, but does not further represent it, making no distinction except for size and shape between England and Scotland, Holland and Switzerland. The oral description, fitly illustrated, resembles the finished model of a country where its physical features are displayed in mountain, valley, and plain. But more than this, the lecturer is your fellow-traveller. You tread with him the path that he has trodden for years, watch his progress, and mark his pace. There are rough places and smooth, stages of the journey to be closely observed, and stages that may be quickly passed over; and he who has been that way before and knows the road will distinguish for you the one from the other, point out hidden and unsuspected difficulties and dangers, and even show where lie the bones of those that have gone before and fallen on the way.

And beyond and above all this, the benefit to be derived from the personality of every true teacher of medicine is to be seen in the temper and the spirit he communicates to his hearers. Partly teacher, partly fellow-learner, he observes with them phenomena of surpassing interest of which both he and they know but little. The book learner, without the sympathy or the advice of another, fares variously, according to his temperament, but he never fares well. Left to himself in the maze of books and of doctrines, he will sometimes despair of knowing, and sometimes he will force himself into the groove of some narrow system that pretends to know everything. The experienced teacher will save him from both extremes. Those who disparage and belittle lectures are, I think, of two classes—students who deliberately shut themselves out from their help, and practitioners who in after life, having gathered a wide experience of their own, forget their early obligations. Depend upon it that the question of the use of lectures is one that ought to trouble me rather than you. The teacher, the interpreter, the go-between, he who should describe and exhibit to you the complex features of disease, cannot wholly fail, he can only by deliberate intent efface himself. But he must always be conscious of shortcomings and fail habitually to realise his own ideal. If any of you honest workers come really and seriously to doubt of the good of lectures, be sure that the fault is ours, is mine.

A CASE OF

ACUTE PERFORATING OR ULCERATIVE AORTITIS IN WHICH THE BACILLI OF ANTHRAX WERE FOUND.

BY THOMAS OLIVER, M.A., M.D., F.R.C.P.,

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DISEASED CONDITIONS of the thoracic aorta, the result of chronic inflammation or of traumatism, and which end in dilatation of that vessel, are well known to us, but we seldom meet with cases where the morbid process is of an acute ulcerative character, the termination of which is perforation and sudden death. The case about to be reported is not only unlike any I have hitherto met, but it differs also from the cases that I have seen recorded; I may therefore be pardoned if I detail the history and physical signs at some length.

Joseph L——, aged thirty-six, a watchmaker, pale, but well nourished, was admitted into the Royal Infirmary, Newcastle-on-Tyne, under my care, suffering from night sweats, extreme nervousness, great pain in the left side of the chest and down the left arm, of a throbbing, shooting character. Eighteen months ago he had experienced a severe mental shock, which had quite unnerved him. Patient had been on the whole a healthy man until he was twenty-three years of age, when he had rheumatic fever. That attack must have been a severe one, for it threw him off work for seven months. Previously to this he had been an athlete, and it was to a wetting caught whilst engaged in some athletic sports that he attributed the attack of rheumatic fever. Four years subsequently to this he had another but much milder attack of rheumatic fever, from which he made a good recovery.

When I first saw him there was considerable pulsation of the heart; the apex beat was very diffused; it was felt most distinctly three inches and a half below the left nipple and one inch external to it. There was also epigastric pulsation. The area of cardiac dulness was enlarged; extending from one inch to the right side of the sternum to just beyond the left nipple line, it measured transversely six inches and a quarter. Over the aortic area there was heard a double murmur. The systolic murmur was carried well up and to the right, whilst the diastolic was carried down the sternum and to the apex. Over the mitral area a loud blowing systolic murmur was heard. This was carried well into the left axilla. The systolic murmur was rough, while the diastolic was rough and cooing. The diastolic murmur was

quite audible to the patient, particularly when he lay on his left side, and it was so loud at times as to be audible to others; his wife, for instance, complained of the noise keeping her awake at night. The murmurs were also heard over the pulmonary artery and tricuspid area, but they were evidently only conveyed there. A systolic bruit was heard in the line of the external iliac arteries and in the arteries at the wrist; a double murmur was heard in both subclavian and carotid arteries. Slight pericardial grating could be distinguished at the apex and base of the heart. Pulse 84; waterhammer. Pain was complained of in the epigastric region, which was increased on pressure. There was neither sickness nor pain after eating. The pupils were dilated. There was no albuminuria.

The case was diagnosed as one of aortic and mitral regurgitation, but the patient complained of more acute pain than one generally meets with in these cases. Part of the pain was doubtless due to the pericarditis. The pulse varied from 76 to 84, and although there was no dyspnœa complained of, his respirations varied from 28 to 40 over a period of several weeks. Tincture of convallaria gave considerable relief, but nothing touched the præcordial pain or diminished the sense of cardiac distress from which he suffered so much as cyanide of zinc in one-eighth grain doses. Eight or ten days after taking the cyanide of zinc he had lost all his pains, he could sleep much better, and he was so improved that he left the infirmary. At this time he could go up the stairs in the infirmary without his breathing being perceptibly affected. On the day that he left the hospital I made the following note:—"Apex is felt four inches below and one inch external to left nipple; over mitral area a well-marked systolic murmur is heard, followed by a diastolic which is distinctly doubled in character. Probably a part of this murmur is pericardial. The aortic double murmur remains unaltered."

For several weeks after this J. L—— attended the infirmary as an out-patient. During this period he resumed his occupation, that of mending watches. I had not seen or heard anything of him for nearly three weeks, when the following circumstance occurred:—On June 17th, after having complained at breakfast of not feeling very well, there having been a return of the substernal pain, he walked three-quarters of a mile to church. The walk was all down hill. On coming out of church none of his friends noticed anything wrong with him; but the patient had scarcely walked any distance when he asked for the arm of one of his friends. Thus supported he had only gone a few paces when he expressed the additional wish to sit down. There was no altered expression of face; no gasping or difficulty of breathing was observed, nor was there complaint of renewed pain. Scarcely had he uttered the request just mentioned than he rolled over in front of his friend, and when looked at was found to be dead.

I was allowed to make a limited post-mortem examination. On removing the sternum, a large pericardial surface of a bluish or slaty colour was brought into view. The pericardium was at once opened, and, on reflecting it, no portion of heart substance was at first observed. The whole of the heart was covered by a thick, smooth blood clot, all of one piece, perfectly undisturbed. The clot quite enveloped the heart. I removed fully one pound of clotted blood. The heart was extremely hypertrophied and dilated, and weighed 24 oz. A most careful search was made by myself and by Drs. Coley and Nihill, who were present, for rupture of the heart muscle, but nothing was at first detected beyond the fact that the tissues at the extreme base of the heart were deeply stained. The heart and portion of the aorta were now removed for more careful examination. The aortic valves were incompetent; left ventricle extremely dilated and hypertrophied; myocardium very pale, grey and mottled; mitral orifice dilated, but valve segments healthy. On still closer examination, the aortic valves were seen to be quite healthy, but the aorta immediately above the orifice was dilated, and a distinct pouching was noticed just above the valves. Over a small area which lay between the mouths of the two coronary arteries, and which extended upwards for nearly an inch and a half, the lining membrane of the aorta was extremely red; it was soft and ulcerated, and in two places was gangrenous. From the centre of this patch a small pouch protruded outwards. Its wall was as thin as ordinary writing-paper; it was bluish-red and soft, and its floor was perforated by an opening the size of a large pin's head. A plate of atheroma lay close upon the mouth of the left coronary artery. In my note of the necropsy, and which I shall interpose here, I find it stated: "This inflammation and ulceration of the aorta is unlike anything that I have ever seen. It resembles ulcerative endocarditis; it has evidently been very acute, and has spread over a considerable surface. It seems to have begun as an acute aortitis which has rapidly run on to ulceration and necrosis." The pulmonary artery was healthy. The wall of the right ventricle and auricle was extremely thin. The blood which filled the pericardial sac had therefore come from the perforation in the floor of the pouch which lay above the aortic valve. The ulceration and gangrene had extended into the neighbourhood of, and had all but involved the mouths of, the coronary arteries, one of which was dilated to the size of an ordinary penholder. The lungs were slightly engorged, frothy, and œdematous, but were otherwise healthy. I have said that the small patch in the interior of the aorta seemed to have been the seat of acute inflammation and gangrene. It resembled the destructive process met with in acute ulcerative endocarditis, and yet it differed from it in the complete absence of anything like the presence of accompanying vegetations. I sent the specimen to Dr. Sims Woodhead, who not only furnished me with microscopical specimens—two of which I have had drawn—but kindly favoured me with his opinion upon the same.

Since the pathology of ulcerative endocarditis has been so thoroughly investigated, we have come to regard it clinically as a diseased condition of grave prognosis, but one not absolutely beyond the reach of treatment. It depends upon microbes, which either light upon an endocardium abraded by previous attacks of endocarditis, or there is a septic condition of blood, and, the minute arteries of the myocardium becoming blocked by colonies of micrococci, there follows, first, death of the area thus deprived of blood, and then, owing to multiplication of micro-organisms, necrosis of the tissues or ulceration. We frequently meet with ulcerative processes in the walls of large vessels—the aorta for example—preliminary to the formation of aneurysm. In atheroma of that vessel there is necrosis with fatty granular disintegration of the intima, already more or less thickened from its having been infiltrated by leucocytes, and the so-called atheromatous ulcer is developed by the disintegrating process pressing towards the lumen of the vessel and causing rupture of the innermost layers of the intima. This is scarcely, however, what occurred in my case, nor can I find in medical literature anything exactly corresponding to it. Ziegler, in his Special Pathological Anatomy (Part 2, p. 64), describes "acute aortitis," and states that "it is rapidly fatal when very extensive, that minor cases usually recover, and that it is rarely seen in the post-mortem room. The changes are similar to those met with in endocarditis and myocarditis. The lining membrane of the vessel looks turbid and somewhat loosened; grey granulations rise from its surface, or there are large irregular vegetations upon it. When the vessel is more seriously affected, the vasa vasorum are found to be extremely distended, and are occupied by cellular, coagulated, and granular masses of exudation. There is a tendency for the leucocytes to congregate around the vasa vasorum from which they have escaped." (See accompanying diagrams.)

In one sense the case of J. L—— has been one of acute aortitis—as witness the altered intima, the accumulation of leucocytes in groups or patches, and the tendency for leucocytes to congregate around the wall of very minute blood-vessels. This, however, scarcely explains the extensive necrosis which led up to perforation of the aorta and sudden death. The necrotic process could only be explained, it seemed to me at the time of the necropsy, on the supposition that micro-organisms had been at work. That supposition is supported by an examination of the sections. Bacilli in abundance are found in groups in various parts of the section; the bacilli, according to Dr. Sims Woodhead, bear the closest resemblance to those of anthrax. It is difficult to explain the presence of these micro-organisms in the aorta of J. L——. He was never, so far as I know, brought into contact with animals suffering from splenic fever. Crookshank, in his "Manual of Bacteriology" (p. 321), dealing with this part of the question, says: "In man the mode of infection is by inhalation of spores, and ingress by the pulmonary or intestinal mucous membrane, or by direct inoculation of a wound or abrasion. The spores are derived from the wool or hides of animals which have died of anthrax,

and the resulting disease is known as woolsorters' disease and pustula maligna." The lungs in my patient were practically healthy. As the necropsy was limited to the thorax, I can offer no opinion upon the state of the intestinal mucous membrane. His position in life would not bring him into contact with rags, nor is it likely that he could have worn clothing belonging to anyone who had suffered or died from anthrax, no case of such disease having occurred in this district.

There are certain diseases in which ulcerative aortitis has been met with. Huchard[1] mentions the existence of *suppurative* aortitis on the testimony of Andral, Rokitanski, Lebert, and Virchow. Their cases terminated in a more or less general purulent infection. Then there is *ulcerative* aortitis described by Stokes, Garcin, and Charlewood Turner, the infections phenomena of which are comparable to those of ulcerative endocarditis. In the Transactions of the Pathological Society (1885–86, vol. xxxvii.), Dr. Charlewood Turner describes four cases of ulcerative aortitis, in one of which the rupture of an atheromatous collection seemed to afford a nidus for the deposition and growth of micro-organisms. Micrococci in great abundance were found occupying the lymph channels and capillary vessels, and were also seen upon the superficial layers of the endarterium. His remaining three cases were associated with injury—e.g., extensive burns, followed by septicæmia; wound of the left internal mammary artery, with consequent septicæmia; and the third occurred in a man, aged thirty-nine, who died on the second day after primary amputation of the left thigh. In this case the heart was healthy, but the aorta was slightly atheromatous. Atheroma of the aorta has been noticed by Lecorché and others to take on ulcerative action, and to be followed by general septic infection—a circumstance which shows how very close is the resemblance between the lining membrane of the heart and aorta, both being liable to become the seat of grave lesions in septicæmia. The case of acute perforative aortitis now reported is, so far as I know, the first on record in which the bacilli of anthrax have played such an important *rôle*.

Newcastle-on-Tyne.

Section of ulcerated portion of aorta under a low power (260). Shows uneven surface, intima having been destroyed; marked accumulation of leucocytes, particularly around the vasa vasorum.

Section of same under high power (1200). Shows myriad of bacilli exactly like those met with in anthrax.

[1] Maladies du Cœur, p. 137.

SOME REMARKS ON CHOREA.

BY WILLIAM DALE, M.D. LOND.

(Concluded from page 982.)

SUMMING up now my own views on the subject in hand, I think the history and general phenomena of chorea will bear out the following propositions:—1. That although chorea is best defined as a functional disease, to call it a "symptom" only is simply "a strife of words." 2. That from the phenomena of hemichorea and its relation to hemiplegia we may, at least tentatively, assume that the seat of the lesion in chorea is in the *sensori-motor ganglia*, at the base of the brain. 3. That the disease very frequently occurs after acute or subacute rheumatism; but very many cases are also observed not having any known connexion with rheumatism in any form. 4. That the cases of chorea in which cardiac murmurs are found have for the most part been preceded by rheumatism, which has disabled the valves; but in many instances they have their origin only in an anæmic state of the system. 5. That certain children are strangely "mobile" in certain nerve centres which are easily influenced by psychical causes, and in these children chorea is very often developed. 6. That, excluding a small number of cases of chorea which from age, serious brain lesions, or other unknown circumstances, are either speedily fatal or resist all remedies, the rest will recover under treatment from the irregular muscular movements and heart symptoms generally; but in some few cases the valvular injury is permanently injurious both to health and life, and the muscular movements persist.

Treatment.—In the preceding pages it has been observed that it is the belief of some that chorea will get well without the administration of any drugs; and although I have not myself put this statement to the proof, it undoubtedly rests on trustworthy authority. This, however, is a very different thing from saying that the disease will pass away without any treatment whatever. Chorea is chiefly and emphatically a disease of neglected and half-starved children among the poorest, in the midst of an environment directly hostile to health; and their removal to the hospital, where their surroundings are greatly modified, especially as to food and nursing, must be looked upon as truly most real treatment; but the question whether choreic children will generally recover without the help of remedies (drugs) whilst they remain at their own homes—homes in many instances as bad as they can be—is, I think, a very questionable problem not yet solved. It is much more probable that under these conditions they do not recover, but that the strange facial contortions, muscular twitchings, irritability of temper, and even imbecility, are but the remnants of chorea in childhood. For my part, I believe that both the duration and the severity of the disease may be greatly controlled by drugs united with the general *régime* of the hospital; and this opinion is certainly not merely theoretical, but is formed after a tolerably large experience.

The treatment of chorea has varied just as the views of its nature and character have varied, and very many reputed remedies, differing widely in their qualities, have been employed. A short list of the more important can

only be mentioned here. Cathartics, as calomel and jalap; anthelmintics, as turpentine and pomegranate; nervine tonics, as valerian and zinc (thirty years ago the last-named drug was held in high esteem, and was administered in very large doses, gradually reached). At the present time cathartics are little used in this disease; turpentine and pomegranate only as a vermifuge, and sulphate of zinc is nearly, if not quite, antiquated. The principal remedies employed in this day are arsenical and ferruginous preparations, with the free use of the cold shower-bath. When there is an anæmic state of the system, a combination of liq. ferri dialisat., and arsenic in the form of liq. potassæ arsenitis, is of great value. If there be no anæmia, arsenical preparations may be given alone, the best being, I think, the liq. potassæ arsenitis. The dose may be three or four minims thrice a day after food, gradually increased to twelve or fifteen minims. Some physicians give it more largely; but I have not seen this done, nor have I thought it in any case necessary. The higher doses being reached, it is usual to diminish the dose by degrees, and daily, just as it has been increased. Some authorities recommend the arsenic in a large dose rather than a small one at first, and this is gradually to be lessened; but I have no experience of this plan, and should not think it always a safe one, at least in young children. Whether arsenic and iron are given in combination or alone, the cold shower-bath should supplement them; but at first and in the younger patients the chill should be taken off, so that the shock may be less alarming. Many cases of chorea will yield to arsenic and the cold shower-bath employed separately, but when combined they seem to be more speedy and certain in their action. The patient very soon greatly enjoys the cold shower-bath, and its employment once or twice a day breaks in upon the monotony of hospital life. Galvanism has been recommended, but, except in the unfortunate cases which are hemiplegic, it cannot, I should judge, be beneficial. It is of the greatest importance, and cannot be too emphatically urged, that during the above-named treatment, or, indeed, during any treatment, the patient should be plentifully supplied with nourishing food, supplemented in some cases by alcoholic stimulants, and in thin, ill-fed children by cod-liver oil as well. I have known chorea recur once and again, and generally in the same form as at first, sometimes in other forms, but the recurring are as amenable to treatment as the primary attacks. [As the last sentence was being written,[1] a female child, aged three years and a half, very delicate and wasted in appearance, was brought by her mother to my private consulting-room for examination, whose only symptoms were frequent and striking movements of the lips, attended by a smacking sound, as when they are suddenly separated, and a kind of checked sigh or noisy respiratory cough. These strictly localised symptoms began three weeks before, and were doubtless choreic in character.] Yet another mode of treating chorea, whose author I do not recollect, has come under my notice, which should be named here, that nothing of importance in the management of the disease may be omitted. I refer to the very watchful administration of morphia and narcotics generally, so that the patient being kept in bed for many days if necessary, and more or less in a state of narcosis night and day, the excitement of the system and her own self-consciousness when awake may be subdued. In a most intractable case thus treated, being a second attack, well marked and peculiar, where the symptoms always began when the girl was noticed, especially by strangers, the patient was sent out of the hospital cured, if my memory is not at fault, in less than a week, and from subsequent inquiries I have learnt that there has been no return of the disease.

In bringing these remarks to a close, one other matter in connexion with the treatment of chorea must be named and emphasised—namely, that all remarks respecting the patient's case in her presence should always be avoided; all observations to students or others as to its peculiarities should be made, if made at all, behind her back; visits by friends, or even by her own parents, should not, as a rule, be permitted; and the greatest possible care should be taken, even to punctiliousness, that all imitation or mockery of her often grotesque movements by those with whom she must associate—as, if in hospital, the rest of the patients or strange visitors—should under all circumstances be discountenanced, for all attention drawn to the patient, of whatever kind, is both physically and morally injurious. In those unhappy and rare fatal cases of chorea attended by fever and wild delirium, resembling, in fact, acute mania, no hopeful plan of treatment, so far as I know, has yet been discovered, and for the most part neither food nor medicine can be swallowed. In the only case of the kind which has come under my observation, hypodermic injections of morphia, which seemed to be called for, failed to calm the system or give relief in any way, but by the inhalation of chloroform some quiet and rest were obtained.

I have been satisfied with the mode of treatment of chorea described above, but others may have treated the disease quite as successfully by very dissimilar methods, some reports of which, indeed, have come under my notice in the medical journals. How many ways there are to Rome! In nervous disease, extending through several weeks, as this ordinarily does, better food and a better environment in the hospital wards are powerful agents in assisting Nature through her troubles. Finally, it must be confessed that in our treatment of all nervous diseases, we never can tell when a cure is effected, how much is due to drugs, and how much to altered and improved hygienic measures fully and wisely employed.

Shanklin, Isle of Wight.

[1] This paper was written more than six months since.

ENDOMETRITIS.[1]

BY ROBERT CORY, M.D., F.R.C.P.,
ASSISTANT OBSTETRIC PHYSICIAN TO ST. THOMAS'S HOSPITAL.

MANY will think me a bold man for venturing to say a few words on this much-controverted disease. Some of our leading obstetricians even deny the existence of such a disease; others say, if it exist, it is very rare; while others affirm it is very common. On entering the discussion, then, I may at once state that I am one of those who believe that it is very common, and that its non-recognition is a serious error in judgment, and condemns those who seek our advice to continued pain, both bodily and mentally; for my experience after fifteen years' work in the out-patient room of St. Thomas's Hospital leads me to think it is not only the most common disease to which women are subject, but also, fortunately, one of the most easily cured.

Firstly, I will try to show why we should expect the mucous membrane of the uterus to be often deranged, and to this end I must be allowed to suggest an analogy between the uterus of the mammal and the ovarian duct of the fowl. It must be common knowledge to most of us that for a hen to lay an egg it is not necessary that a cock should be concerned in its production; but such an egg, I need not say, is sterile. Do women ever lay sterile eggs? Yes, most women lay a sterile egg every month when they menstruate; in fact menstruation, properly considered, is only the abortion of an unimpregnated ovum or egg.

The ovum of the hen takes about from four to six hours[2] to pass from the infundibulum of the ovarian duct to the so-called uterus, where it remains from twelve to twenty hours for the deposit of the shell. In the first part of its course through the duct there is a dense albuminous covering, the membrana chalaziera, given to the egg, which at either side becomes twisted, forming the chalaza; upon this is deposited the first layers of the soft albumen. This albumen is much added to in the more glandular part of the oviduct. When the egg arrives at the narrower part of the oviduct called the isthmus, denser layers of albumen are again excreted, forming the membrana putaminis. The egg, with its small end towards the cloaca, passes into the uterine or shell-forming dilatation.

The ovum of the human female is very much smaller than the ovum of a hen, owing to the very small amount of food yelk that it contains, but, as we know, the human ovum is developed into the infant within the body of the mother, and consequently there is not that need of nourishment which the ovum of the fowl requires, which, as everybody knows, is developed into the chick external to the body of the hen. But there is the same provision in kind in the human uterus for giving protection and nutriment to the ovum, and if the ovum is not fertilised it has to be got

[1] A paper read before the Brixton Medical Society on Thursday, Nov. 20th, 1890.

[2] Owen: Comparative Anatomy and Physiology of Vertebrates, vol ii., p. 253

rid of, not only the ovum itself, but also its nidus or shell, and as the nidus or mucous membrane is very intimately connected with the uterus, its expulsion gives rise to bleeding at the egg-laying, or, as we call them in the human female, at the menstrual times.

Now, I think if we can regard the mucous membrane of the uterus not only as an internal covering to the organ, but also as performing monthly important egg shell functions, then we can see more reason for its frequent derangement, for, as a rule, the more complex an organism, the more prone is that organism to disease. The chief cause of the disease is the admission to the uterus of foreign germs, which, growing there, produce disease of that part to which they gain entrance. The two great means by which these organisms gain admission is, first, during the act of parturition; secondly, the results of gonorrhœa. The symptoms to which this disorder gives rise are, firstly, pain, and the pain is usually situated over the sacrum. Here, be it remembered, there is an intimate connexion between the sympathetic and spinal nerves, and hence this is the region where the pain exists. The pain may radiate down the front of one leg, generally the left leg—that is, is present down the course of the anterior crural nerve. There is also almost invariably more or less leucorrhœa, or xanthorrhœa, as it should rather be called, because the discharge is yellow, not white. This discharge is irritating, like the mucus from the nose during a common head cold, and hence causes abrasion of the external os. Endometritis is almost always the cause of ulceration or abrasion of the os. When this abrasion is well marked, we shall have the symptom to which this condition gives rise, and this is an increase of the discharge; and as this comes from the cervical canal, the discharge is thicker, but still yellow. Pain is also felt in both groins, but chiefly the left; often, but not invariably, there is pain under the left breast, and also pain on sitting down. Menorrhagia and dysmenorrhœa are often complained of, but not invariably, and the disease almost always renders the woman sterile while it lasts. Constipation is generally present. The disease may continue for years if not properly treated; three or four years is by no means an unusual duration, but it may be cured in as many weeks.

I will now speak of the treatment. The most efficacious means of curing this disorder is the application to the uterus of carbolic acid saturated with iodine, which may be conveniently called iodised phenol. This is best applied by means of a Playfair's probe, round the end of which is smoothly, but not too tightly, twisted some cotton wool. This is dipped in the solution and then passed into the uterus. Before doing this we should always pass a full-sized Ferguson's speculum and the uterine sound in order to be sure of the direction of the cavity, as we should be able at once to introduce the probe with the application, otherwise the application will cause the canal of the cervix to contract, and its further introduction will thus be frustrated, and more harm than good may be done by only a partial introduction. Two applications as a rule are sufficient, the second three weeks after the first. The patient generally comes back the week after and says she is worse, and if the application be again repeated, the following week she will be still worse; but if let alone, she generally comes back the following week, saying she is much better. If she remains better I always leave well alone, but otherwise another application suffices; but this is never applied under three weeks or a month. As for medicinal treatment, this I look upon as only of secondary importance. Generally I give twenty grains of bicarbonate of soda and twelve grains of citric acid in an ounce and a half of water three times a day.

Lambeth-palace-road, S.E.

CASE OF ACCIDENTAL POISONING WITH EPSOM SALTS (SULPHATE OF MAGNESIA).

BY WILLIAM SANG, M.D. EDIN.

ON Friday, Aug. 21st, I was sent for hurriedly to see Mrs. M——, who was suddenly taken very ill. On arrival at the house at 10.30 A.M., the patient, who was a tall, slender, and slightly anæmic woman, about thirty-five years of age, told me that she had sent about an hour previously to a neighbouring chemist, and purchased twopennyworth (four ounces) of ordinary Epsom salts. She had emptied the whole packet into a tumbler, pouring sufficient hot water to dissolve them, or nearly so, and then drank off the whole quantity. I asked her why she had done it, but she said that she would tell me some other time. Meanwhile, she was leaning over the bed, and complained of a burning pain in the stomach and bowels (which was not, however, excruciating), also of difficulty of breathing or rather a choking feeling, and especially a peculiar feeling as if the power was going out of her arms and legs. The tongue and mucous membrane of the mouth were normal; there was no sickness, no vomiting, and no purging. Pulse about 96, regular. I immediately gave her an emetic of thirty grains of zinc sulphate, but it failed to act. I ran home for a stomach-tube &c., which took me about five minutes, not more, but on my return I found the patient in a state of hopeless collapse. The pupils were dilated, there was slight twitching of the muscles of the face, and complete paralysis. She rapidly became comatose, and died at 11.15 A.M.—that is, about twenty minutes after I first saw her, and about an hour and fifteen minutes after taking the dose. The radial pulse was distinctly felt about two or three minutes after the respiration had ceased. There was no post-mortem examination.

Remarks.—I have little hesitation in giving the following explanation as the poor woman's reason for taking the medicine. She had probably passed a monthly period, and, fearing that she might become pregnant, had sent for and, as she thought, taken a big dose of salts in order to put herself right. She had taken the whole quantity which she had received for twopence, never dreaming that she was taking more than an ordinary good dose. Cases of poisoning with Epsom salts seem to be of rare occurrence. I have looked into one or two works on poisons, and find a case noted in Sir R. Christison's work on Poisons. The case happened in 1842, and, as it is of some interest, I take the liberty of quoting it: "A boy, ten years old, took two ounces of this laxative, partly dissolved and partly mixed in a cupful of water. He had hardly swallowed it before he was observed to stagger and become unwell. When a surgeon saw him half an hour afterwards the pulse was imperceptible, the breathing slow and difficult, the whole frame in a state of extreme debility, and in ten minutes more the child died without any symptoms of note, and, in particular, without any vomiting. The case was investigated judicially. The father was doatingly fond of the child, and gave the laxative on account of some trivial illness, which he supposed might arise from worms. On the most careful inspection, no marked appearances could be found. The substance taken was pure Epsom salts." In Taylor's book on Poisons a case is reported of a trial that took place at Huntingdon in 1844, in which two men were indicted for feloniously killing another man by administering a large quantity of Epsom salts in beer. The deceased was an old man, and in the habit of drinking beer to excess. He had drunk several pints drugged with sulphate of magnesia, and was seized with violent purging, and died in forty-eight hours. I have quoted these two cases in order to draw attention to the two following points. 1. Epsom salts, when given in repeated doses, as in the case recorded in Taylor, acts undoubtedly as an irritant poison. 2. In the case which came under my notice and the one I have quoted from Christison, where a large quantity of the drug was taken at once, the irritant effects of the salts were by no means marked, and death was more probably due to *a direct action on the cerebro-spinal system.* The ordinary dose of Epsom salts is half an ounce, but I have often known as much as two ounces taken with no other effect than smart purging. Even such a quantity as proved fatal in the case of this poor woman might not be more than a strong dose for a healthy, able-bodied country labourer. I fancy a good deal depends on the constitution and idiosyncrasy of the individual as to the dose-effect. I may say that I satisfied myself that what the chemist supplied was four ounces of (Howard's) Epsom salts, and was labelled "Epsom salts." One cannot be too careful in dealing with even simple drugs, and I think it would be an advantage if every label gave prominence to the dose as well as the name of the drug.

Dundee.

AT a meeting of the governors of the North Wales University College at Chester on the 28th ult. the committee reported that the trustees under the will of the late Mr. Evan Thomas had paid over to the University nearly £30,000, but some time must elapse before the total amount could be definitely ascertained.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

ON THE VALUE OF KOCHER'S METHOD OF REDUCING SHOULDER DISLOCATIONS.

BY S. L. WOOLMER, M.R.C.S., L.S.A.

A. B——, aged forty-two, first dislocated his shoulder in November, 1889. Traction on the arm and the heel in the axilla failed to reduce it, although the patient says that considerable force was employed and repeated attempts made. It was finally reduced by this means under chloroform; Kocher's method was not used. In July, 1890, five days after, he came to me with a subcoracoid dislocation of the right shoulder. Employing Kocher's method, and without an anæsthetic, it was immediately reduced. Again, in September of this year, while on board ship, and during a storm, it again became dislocated. The ship surgeon employed traction, and, in spite of prolonged efforts, did not succeed in reducing it. The patient explained to him the success that had attended Kocher's process, but it was not employed, and subsequently unavailing efforts were made by traction at a right angle and the heel in the axilla, the patient meanwhile being lashed down. Chloroform was not administered. On landing here twenty-five days afterwards, I tried Kocher's method, but as I did not try to induce extreme outward rotation of the humerus, I failed to reduce it. There was a history of syphilis, and I hesitated to make continued efforts for fear of fracturing the humerus, as may happen with this method if it is employed in old people or in certain diatheses. However, with an anæsthetic it was easily reduced at the first attempt. I feel sure that if I had persisted in inducing extreme outward rotation it could have been reduced without an anæsthetic.

The advantages of the process are great and manifold. In at least 95 per cent. of the cases it dispenses with the necessity of an anæsthetic—a very great consideration. It requires no assistant. It is perfectly logical in its application, and exposes the patient to a minimum of rough treatment. There is one point absolutely essential to the success of the treatment, and which is generally made too little prominent, and that is that the elbow must be carried forwards over the chest, while the humerus is still in a state of outward rotation, and it will be found that before it has described an angle of thirty degrees it will have been reduced. After the reduction is supposed to have been effected, the hand should be laid on the opposite shoulder and the elbow made to press well in the epigastrium. If this can be done, the reduction is complete.

Concordia, Argentine Republic.

CASE OF ENTERIC FEVER IN A CHILD AGED NINE MONTHS.

BY J. REGINALD FULLER, M.R.C.S., L.R.C.P., L.S.A.,
SENIOR RESIDENT OBSTETRIC OFFICER, ST. MARY'S HOSPITAL.

VIOLET H——, aged nine months, was brought to the hospital on Aug. 1st, suffering from diarrhœa, sickness, heaviness, headache, and crossness. The stools, which I had the opportunity of seeing, were of a thick and yellow nature. The mother stated that the child had been listless and had refused food for ten days or so, but that the symptoms which caused her to bring the child to the hospital—viz., the severe diarrhœa and sickness—had only supervened on Friday, the 31st, although on the 30th the child had been more than usually dull and feverish, and had slight diarrhœa. When seen on Aug. 1st the child appeared to be very ill; the skin, though white, and not flushed at all, was dry, and felt hot; the temperature was found to be 102°; the tongue was dry, slightly furred, but not particularly red at the tip. The abdomen was slightly tympanitic; there seemed to be no pain on handling it except on deep pressure, and no spots were discovered anywhere. On the 2nd the infant seemed worse, the temperature was 101·5°, and the abdomen was more distended. Death took place on the 3rd. At the post-mortem examination held on the following day the heart was found to be normal, the cerebral vessels slightly congested, and some fluid, slightly in excess, in the lateral ventricles. The kidneys and liver were normal. The spleen, bilobed, not enlarged, soft or congested. The stomach contained curds; the small intestine was red in the neighbourhood of Peyer's patches; these patches were inflamed and elevated above the surrounding surface, and some of the lower ones were commencing to break down. The mesenteric glands were enlarged, and the solitary glands of the cæcum were abnormally prominent; the rest of the large intestine was normal, and there was no perforation of the gut, and no peritonitis.

On inquiry the drains were found to be defective, the water-closet not having sufficient water-supply, and being next to the living room. Another woman in the house was laid up with similar symptoms—namely, pain in the abdomen, headache, and diarrhœa. Also about the same time another child of the same woman, aged eighteen months, was brought to the hospital with symptoms precisely similar, except that there was no elevation of temperature. It had been taken ill on Sunday, Aug. 2nd, with diarrhœa and vomiting. It had, however, suffered from whooping-cough since the winter, and had had diarrhœa in a mild form for three weeks.

I thought this case was worthy of record, as I have only been able to find one recorded case of enteric fever occurring in an infant—namely, one aged six months. Dr. Maguire kindly examined the intestines with me, and declared them to present the typical lesions of enteric fever. It is a question whether the elder child, who made a rapid and perfect recovery, did really suffer from the disease. The close proximity of the defective drains, and also of a refuse bin, probably was a sufficient cause. Enteric fever may possibly occur oftener in infants than is generally supposed, since it is so seldom fatal; whilst the occurrence of spots is so infrequent, and intestinal disturbance so common.

SUBACUTE GANGRENE RESULTING FROM INFLAMMATION OF THE INGUINAL GLANDS.

BY J. B. BAWDEN, M.D. EDIN.

THE following somewhat unusual case may prove interesting to the readers of THE LANCET.

On Feb. 19th, 1890, I was called to see T. C——, baker, an old-looking man, aged fifty-two. He was evidently in very bad health, and looked quite twenty years older than he was. I could not get any satisfactory personal history, but I should judge him to have been a man of intemperate habits. He told me that his bowels had not acted for three or four days, that he had taken pills to remedy this, but without effect, and that he was getting anxious about himself. On examining him I noticed a swelling in the right groin just below Poupart's ligament. This he told me had been present for some years without causing him any inconvenience. As the swelling was movable, not tender, and gave no impulse on coughing, I concluded that it was a group of degenerated inguinal glands. The swelling was doughy to the touch. I concluded that it was not the cause of his symptoms, and gave him a saline purgative mixture. On the 20th the bowels had not acted; I gave him a soap-and-water enema which effectually emptied the lower bowel. After this the bowels gave no trouble, but acted once a day. On the 22nd his condition had continued satisfactory. As the tongue was now clean, I gave him a tonic, and told him to let me know if he wanted anything. On the 25th he sent for me, because the swelling had become painful. On examining the swelling, I found that it had become inflamed. The swelling had increased, and the skin was dull red. No fluctuation and not much induration. There was very little constitutional disturbance. Temperature 99·5° F. I put him on milk diet, and gave him a lead and opium lotion to keep applied to the groin. He seemed to go on fairly well until March 2nd, when I found that the parts were becoming gangrenous, and that the cellular tissues about the groin had become emphysematous. I incised the swelling freely, and ordered charcoal poultices to be applied constantly, to get rid of the smell and clean the wound. Internally I gave him a mixture containing

amm. carb. and tr. cinchon. co., and ordered free stimulation with brandy, as his strength seemed to be failing. The gangrenous action ceased to spread, his general condition improved, and a line of demarcation formed, and by March 5th the slough had to a considerable extent separated. As the gangrenous odour had almost disappeared, I dusted the wound with iodoform, and dressed it with carbolic lotion (1 in 40) twice a day. When the slough had separated there was an ulcerated surface extending nearly the whole length of Poupart's ligament. It was irregular in shape, widest and deepest near the pubes, and about three inches wide, tapering off to a point at the outer end. Under this treatment the wound healed slowly but satisfactorily. I gave him quinine and iron internally and ordered him port wine. By April 5th the wound had almost healed and was firmly scabbed over. He had improved very much in health and appearance, and has continued well ever since.

Remarks.—The important point in this case was the diagnosis. I was puzzled as to whether I had overlooked an omental hernia which had become strangulated. I based my diagnosis on the mobility of the swelling when I first saw it, the absence of impulse on coughing, the absence of vomiting, the regular action of the bowels, and the absence of grave constitutional disturbance throughout. In similar circumstances I should treat the case as if it were a hernia, and cut down on it, as a mistaken diagnosis would be very serious, and the operation on a degenerated gland could do no harm.

West Hampstead.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum allorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Procemium.

WEST LONDON HOSPITAL, HAMMERSMITH.

A CASE OF VESICAL CALCULUS IN A FEMALE CHILD; SUPRA-PUBIC LITHOTOMY.

(Under the care of Mr. LEONARD A. BIDWELL.)

THE question as to the kind of operation best adapted to the removal of stones from the bladder of female children has received considerable attention. Mr. Jacobson[1] writes: "It will be wiser, I think, to make use of the supra-pubic operation in female children for all save the very smallest, stones. Lithotrity is by no means easy in these small bladders and the risk of vesico-vaginal fistula has already been shown to be very considerable. Mr. Barwell, who successfully extracted from a female child aged nine a stone which weighed 2¼ oz. by the supra-pubic method, expresses his preference for that method, having had under observation no less than three cases of vesico-vaginal fistula, which had resulted from the extraction of calculi by vaginal lithotomy[2] when the patients were young. Mr. Walsham considers[3] that moderate and even large stones can be easily removed from the bladder of young children by vaginal lithotomy, aided, if necessary, by dilatation of the vagina, incision of the fourchette, and crushing of the stone by the wound made through the septum, without any risk of a permanent vesico-vaginal fistula, so long as the edges of the incision are not bruised. Some interesting cases are recorded in our medical papers of lithotrity,[4] extraction by forceps after dilatation,[5] or after supra-pubic lithotomy.[6] For the notes of the case we are indebted to Dr. F. H. Alderson, house surgeon.

A. S——, a healthy-looking girl, aged eight years, was admitted into the West London Hospital on July 24th, 1891. For twelve months the child had complained of pain when micturating, and during the last three months she had suffered from incontinence of urine and prolapsus ani. There had never been any hæmaturia. The child had always lived at Fulham. No urine could be collected for the purpose of testing. On sounding, a large stone was felt, which appeared to completely fill the bladder; on rectal examination, its size was estimated to be over an inch in diameter.

On July 27th the child was put under the influence of chloroform, and Mr. Bidwell operated. A rectal bag was placed in the rectum, and six ounces of water injected into it, but no water could be kept in the bladder owing to the contracted state of its walls. After the usual incision had been made, the portion of the bladder uncovered with peritoneum was easily reached. The bladder was then held up by a suture passed through the whole thickness of its coats, and an incision of about half an inch made into it. The stone was extracted with forceps, after considerable difficulty. The bladder was then washed out with boric acid solution, and its wall stitched to the skin by one suture on each side; a drainage-tube was placed in the bladder, and the angles of the skin wound sutured. The stone measured an inch and a quarter in each diameter, and seven-eighths of an inch in thickness. Its weight was 200 grains. On section there was a nucleus composed of an oxalate, covered by very many layers of phosphates and urates.

July 29th.—The child has had no bad symptoms. The drainage-tube and sutures were removed from the bladder. A soft catheter was tied in the urethra.

Aug. 6th.—Catheter left out two days ago, and no urine has passed through the wound, which is quite superficial.

10th.—Till to-day the urine passed naturally, but this evening some escaped by the wound. The temperature, which had been normal since the operation, rose to 102° this morning. No collection of pus anywhere. Tongue coated.

13th.—Temperature rises at night to 103°. No pain or fulness about abdomen. No abnormal physical sign in chest. Bowels irregular. Urine still comes through wound, but the greater quantity passes per urethram.

24th.—Temperature normal since Aug. 17th. Wound almost healed. Urine passed twice daily.

27th.—Temperature last night 104°. Some pain in left iliac region. Fæces felt in sigmoid flexure. Wound dry.

31st.—Temperature normal again. From twenty-eight to thirty ounces of urine passed daily, which is acid and contains no albumen.

Sept. 8th.—Wound has been quite healed for some days, and the child has been up. Discharged.

Remarks by Mr. BIDWELL.—The large size of the stone in a female child is remarkable, only a few cases being recorded. It is interesting to find that the nucleus was an oxalate and not a foreign body; indeed, I think that the frequency with which a foreign body forms the nucleus of a stone in females has been rather exaggerated. Thus, out of a series of twenty-four cases[7] of stone in the female bladder, only five were attributed to a foreign body. At the present time, the choice of operation for a stone of any considerable size in the female must lie between lithotrity and the supra-pubic operation. The contracted state of the bladder and the impossibility of retaining any fluid in it seemed to contra-indicate lithotrity. The extraction of the stone was difficult, owing to the small size of the part of the bladder uncovered by peritoneum. I had intended to suture the wound in the bladder, and merely to place the drainage-tube in the superficial wound; but as the edges of the wound had been bruised during the extraction of the stone, I thought it best to leave the bladder quite open, and I do not think that convalescence was much retarded in consequence, because urine has ceased to come through the wound within one week. Unfortunately, owing to some gastro-intestinal disturbance, the wound broke down twice before soundly healing.

[1] The Operations of Surgery.
[2] Med. Chir. Trans., lxix., 342, 2nd ed., p. 946.
[3] St. Barthol. Hosp. Reports, vol. xi., p. 129.
[4] Lunn: THE LANCET, vol. i. 1884, p. 385.
[5] Lucas: Medical Times and Gazette, vol. ii. 1885, p. 632.
[6] Garden: Medical Times and Gazette, vol. i. 1880, p. 449. Robson: British Medical Journal, 1890, p. 841. Bond: THE LANCET, vol. ii. 1889, p. 200. Cadge: British Medical Journal, 1886, July.

DURHAM COUNTY HOSPITAL.

A CASE OF FOREIGN BODY IN THE BLADDER AND URETHRA; REMOVAL; RECOVERY.

(Under the care of Mr. VANN.)

THE numerous things that have been inserted into the urethra for various purposes would take up more space to enumerate than is at our disposal. They appear most commonly to have been introduced with the intention

[7] Medical Times and Gazette, vol. ii. 1859, p. 82.

of relieving some obstruction to the outflow of urine, either from stricture of the urethra, or from enlarged prostate. The ordinary gum-elastic catheter may become a source of danger if the bone rim of the instrument be lost, as instanced by the case of an old man eighty-four years of age recently under treatment at the Royal Free Hospital. Unsuccessful attempts at removal having been made outside, he was sent to the hospital and the instrument removed from the bladder. A curious instance of a piece of thorny cane introduced as a punishment is described by Dr. Harris.[1] This from the set of the thorns was impossible of extraction without the passage of a tube over it, a method of removing foreign bodies first suggested by Mr. Christopher Heath in THE LANCET.[2] The surgeon must not forget to fix the foreign body from the perineum when trying to extract it. Of cases similar to the following, we have described one under the care of Mr. Brunel,[3] in which the pin was manipulated so that the point projected in the perineum; it was pulled out until the head prevented further progress, then turned and the head pushed forwards through the meatus, and the pin extracted. Mr. Hunter[4] and Mr. Curtis[5] have also described similar cases in which the same manœuvre was successful. In the following case it was considered advisable to perform perineal section. An interesting review on Pitha's paper on Foreign Bodies in the Urethra is published in the *British and Foreign Medico-Chirurgical Review*.[6] For the notes of this case we are indebted to Mr. Selby W. Plummer, house surgeon.

N. S——, aged seventy-three, a miner, was admitted on Sept. 25th, having seven days previously passed a long pin down his urethra in order to relieve himself of "a stoppage of the water." When he had passed it down a certain length it slipped from his grasp and he was unable to withdraw it. He said he experienced immediate relief as to difficulty of micturition. It was only some days after this, and owing to an uneasy feeling and a "prodding pain" when sitting that he consulted his medical man, who, telling him he could feel the pin, advised him to go to the hospital.

On examination the house surgeon detected an indistinct prominence in the perineum, pressure on which caused the "prodding pain." Per rectum, the pin was easily felt in the urethra, apparently passing into the bladder; the prostate was somewhat enlarged. Both with and without an anæsthetic, all attempts to grasp and steady the pin so as to cause the point to project through the perineum failed, though it could easily be felt with urethral forceps; so, under chloroform, a Wheelhouse's staff was passed down the urethra till it impinged on the foreign body. Mr. Plummer then opened the urethra in the perineum in the usual way. Being anxious to restrict the injury to the urethra as much as possible, only a sufficiently large opening was made to enable a pair of dressing forceps to be carefully introduced into the urethra as the staff was slowly withdrawn. Passing the forceps on towards the bladder, the pin was easily felt and seized. Forward traction caused its point to project close to the edge of the wound, and after a slight nick with a scalpel the pin was withdrawn. It was a blue steel bonnet pin five inches long, with a black glass head the size of a large pea. The wound was not sutured, but lightly packed with oiled lint, only a few drops of urine escaping during the first two days. It rapidly granulated up. The man reported himself on Oct. 13th with the wound soundly healed, a full-sized Lister's bougie passing into the bladder with perfect ease. Mr. Kimpster kindly assisted at the operation.

WEYMOUTH SANATORIUM.

A CASE OF OVARIOTOMY, WITH COMPLICATIONS.

(Under the care of Dr. MACPHERSON LAWRIE.)

IN this case the sequence of events appears to have been the growth of an ovarian tumour, peritonitis, and the formation of adhesions caused by its presence; the operation of paracentesis to relieve the symptoms of pressure caused by the growth of the tumour; and escape of the fluid contents of the cyst into the peritoneal cavity as they gradually re-formed, in consequence of the continued patency of the hole in the cyst made by the trocar. It emphasises the need for early removal of these growths, shows one of the dangers of paracentesis, and the result which may be obtained in even the most unpromising cases of adherent cyst wall with good drainage and aseptic applications.

The patient was a fairly strong woman, aged thirty-seven, who had had five children, the youngest of which is nearly five years old. Her confinements do not call for any special remark, and she never had a miscarriage. The periods usually appeared every three weeks, lasted about four days, and were normal in character. She always suffered a good deal from leucorrhœa. Her illness dates back for about two years, when she noticed a slowly increasing enlargement of the abdomen rather to the left side. This gave her little inconvenience at first. In the course of twelve months she was attacked with peritonitis associated with extreme pain ("agonising pain" she calls it) in the left ovarian region. The pain was constant, exceedingly severe, and she was obliged to call in medical assistance. The symptoms were obstinate, but eventually yielded to remedies, and the pain disappeared, leaving the general enlargement unaffected. For two or three months she remained pretty well, then had another severe attack of peritonitis, lasting for eight or nine weeks. She was again relieved, and continued to improve for some months, when she had another attack. This one was more serious, the pain was almost unendurable, and the swelling greater; it was accompanied by high fever and delirium, and her condition became critical. She was now tapped, with great relief, and several quarts of dark-brown fluid were removed. The fever gradually subsided, and with it the delirium and other symptoms, but for some time she was weak and ill.

About six or seven weeks after the tapping she passed under the care of Dr. Lawrie. The abdomen was very much distended, with marked general fluctuation, universally dull except in the right flank. On vaginal examination, the os was found to be large, congested, and abraded. The sound passed three inches. A large immovable swelling occupied the greater part of the pelvis, indistinctly fluctuant, and pushing the fundus, which was rather difficult to define, over to the right side. The conclusion was that she was suffering from an ovarian cyst, either unilocular or with one cavity greatly predominating, and without complications.

On Sept. 6th, with the assistance of several colleagues, Dr. Lawrie operated. The tissues bled rather more freely than usual, and a good many pressure forceps were used. While proceeding with the greatest care, a spout of brown fluid suddenly appeared. Assuming that the sac had been perforated, a Spencer Wells' large trocar was introduced, and about two gallons of dark-brown fluid were easily removed, but it was not possible to pull up anything like a sac into the teeth of the trocar. The wound was enlarged, and on introducing the hand into the cavity a large quantity of partially organised inflammatory tissue was found and removed; and as the intestines protruded it became obvious that the cavity was that of a diseased and thickened peritoneum, not that of an ovarian cyst. The opening was now made much larger, and after flushing out the peritoneal cavity with hot water the cyst was found occupying the greater part of the abdominal cavity, and extensively adherent to liver, bowels, and bladder. The trocar was introduced this time into the cyst and about two gallons of thick brown fluid removed of a similar character to that withdrawn from the peritoneal cavity. An attempt to extract the empty cyst was made without success. The opening was enlarged, the cavity washed out, and another unsuccessful attempt at extraction made, the adhesions being exceedingly strong and numerous. The next step was to check any bleeding, and wash out and clean the sac of the cyst and the abdominal cavity. The edge of the cyst was stitched all round to the edge of the large abdominal wound, except at one point on the left side. Through this aperture a glass drainage-tube was passed into the abdominal cavity and another into the sac, and the median incision partially closed. The wound was dressed, the abdomen bandaged, and the patient put to bed.

This was a long, difficult, and unpromising operation, and at the close the prognosis looked bad. The patient's only chance was drainage, as perfect as it could be. This was accomplished by introducing a silver catheter alongside either glass tube into the abdominal cavity and into the sac through the openings, purposely left large, and

[1] Brit. Med. Journal, vol. i. 1887, p. 391.
[2] Vol. ii. 1864, p. 121.
[3] THE LANCET, vol. i. 1887, p. 470.
[4] Brit. Med. Jour., vol. i. 1883, p. 1065.
[5] Ibid., p. 956.
[6] Ibid., vol. ii. 1859, p. 264.

pumping in by means of a Higginson syringe large quantities of weakly carbolised water till the blood and discharge were expelled, and the solution ran out in a pure stream through the glass tubes. For the first week this was done twice daily. Indiarubber tubes were then substituted for the glass ones, and the same process continued once daily. The greater part of the sac sloughed, and from time to time large portions of it were removed, and now it is probable that it has been almost entirely extracted, any remaining portions having been thoroughly destroyed. Gradually the tubes were shortened, and finally removed. The discharge rapidly diminished, and on the twenty-eighth day it was practically *nil*, the wound almost closed, and the patient sitting up.

Remarks by Dr. LAWRIE.—The operation presented several unexpected difficulties, and I feel greatly indebted to Drs. Childs, Simpson, Carter, and Griffin for their help and counsel in dealing successfully with them.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Decomposition of Urine.—Malignant Disease of Thyroid Gland.—Double Serous Encysted Pachymeningitis.—Myxo-fibroma of Spinal Meninges.—Gumma of Liver.—Chronic Tubercular Pericarditis.

AN ordinary meeting of this Society was held on Nov. 3rd, the President, Sir Geo. M. Humphry, in the chair.

Mr. S. G. SHATTOCK read a communication on the Action of Proteus Vulgaris and of Pyococci on Urine. He also gave an explanation of the deposit of phosphates from urine on boiling, and made remarks on the amphoteric reaction of urine. He said that an assertion commonly made was that the conversion of urea into carbonate of ammonia always depended on the action of living micro-organisms. Pasteur's researches on this matter were well known, and his observations were afterwards confirmed and extended by Lister. It appeared certain from their work that nothing which healthy urine contained could bring about its own decomposition, and it was well known that in large hydronephrosis sacs the urine would remain clear and sweet for years. In extravasation there would be decomposition, but then the urine was usually foul beforehand. He showed three specimens: one of urine which had been sterilised, and which remained clear for three months; one which had been exposed for a few minutes to the atmosphere and which had undergone ammoniacal change; while another showed the so-called acid fermentation. Although one organism was usually credited with being the active cause of the decomposition of urine—viz., the micrococcus ureæ—yet others had been found to produce a similar change. For instance, one bacterium and two forms of micrococci had been isolated, and at least five others had been described. Two methods of prosecuting a research into this subject were possible: (1) to isolate from the urine the organism growing in it and to identify it, and (2) to inoculate urines with other bacteria not usually found there, and see if they would produce ammoniacal fermentation. Another question was whether the hydrolysis of urea could be brought about by any method akin to the change produced in starches and albumens by superheating them. He showed that if urine were boiled for some time ammonia would be given off, and a gradual hydrolysis of urea would take place. If neutral urine were boiled, a precipitate of normal phosphates would occur; and if an acid urine were boiled for a sufficiently long time the same result would follow. He took several tubes of urine which had been filtered and sterilised, and into these he inoculated active cultures of germs which had been grown in broth. It was a startling fact that in fully acid urine the common proteus vulgaris could not grow. Urine which was faintly acid, if heated discontinuously for four days, became amphoteric, which was due to the development of free ammonia in it, and in this solution the proteus vulgaris grew slowly to a certain extent. He had also tried both forms of streptococcus pyogenes; the streptococcus bovis induced a faint ammoniacal reaction in the urine in which it was grown. But with the pyococcus albus and aureus the most marked results were obtained, in forty-eight hours the pyococcus aureus producing an abundant fermentation with phosphatic deposit. These observations had an important bearing on some questions in surgery, for it had been usually held that, in order for decomposition to occur, the micrococcus ureæ should gain entrance from without, being either introduced by instruments or travelling up the urethra by means of the ropy mucus sticking in its canal. But these experiments showed that a suppurative pyelitis might induce an ammoniacal fermentation, and cause a precipitation of ammonio-magnesian phosphate. The production of carbonate of ammonia by this fermentation was not of itself of so much importance in disease: it served rather as an index of the suppuration or putrefaction that was going on, and it was in this latter that the danger of the case depended. The carbonate of ammonia might excite inflammation, and then the proteid products from the inflamed mucous membrane were added to the urine, and these furnished the toxic albumoses and alkaloids, which were elaborated by the agency of the micro-organisms. The possibility of an indirect pyogenic infection through the blood was not to be lost sight of, and in this way a simple catarrhal pyelitis might become suppurative or a simple catarrhal cystitis purulent. He did not know at precisely what temperature the hydrolysis of urea occurred, but it certainly went on slowly at 60° C. A proper fermentation did not occur without the action of microbes, though a certain amount of decomposition of an unimportant kind might do so.—The PRESIDENT alluded to the importance of the possibility of urine undergoing alkaline fermentation without the introduction of micro-organisms from without. The amphoteric reaction was also extremely interesting. Extravasation of urine could certainly sometimes occur without serious result. He related the case of a lad in whom many years ago he had performed the high operation for stone. Before commencing to cut into the bladder he had taken care to draw off the urine with a catheter, but on opening the bladder above the pubes a copious flow of urine escaped, as he believed, from the distended ureters and all the pelvic tissues got thoroughly saturated with urine, without any untoward result. The boy made a complete recovery. This made him afterwards less apprehensive of the results of extravasation.—Dr. ORD acknowledged that it would be very important if it should be established that urine could undergo an ammoniacal decomposition independently of microbes introduced from without. In a paper which he had recently heard at Washington, it was contended that the skin was the special habitat of the staphylococcus albus, and thus a source of trouble in operations. This might be true, and if so would show how difficult it was to exclude the introduction of organisms. Excess of carbonate of ammonium was prejudicial to the urinary passages. He related the case of a child of five or six years of age who had been under his care with hæmaturia, and whose urine was alkaline; the alkalinity had produced inflammation, hyperæmia, and hæmorrhage. After treatment with benzoate of ammonia for twenty-four hours the urine became acid and the hæmaturia ceased. Acid fermentation of urine, probably not a very correct term, had been dealt with by Sir William Roberts, who had argued that the uric acid was present as a quadrurate of potash, soda, ammonia, and lime. Decomposition readily occurred into biurate and uric acid, with the precipitation of the latter. Neutral urates were singularly apt to break up into uric acid and the alkaline base. This light connexion between acid and base was favourable to Mr. Shattock's supposition.—Dr. DELÉPINE referred to the amphoteric reaction. If neutral litmus paper were used urine could almost always be shown to be either acid or alkaline.—Dr. HALE WHITE had found that in cases of advanced phthisis the urine was occasionally very acid, and that it would remain unchanged for months except for evaporation.—Mr. SHATTOCK, in reply, thought that infection by pyococci might be through the blood. He agreed with Dr. Ord's observation that carbonate of ammonium excited inflammation. If Sir William Roberts' theory were correct uric acid should be deposited as soon as the urine was voided, and this was not the case. With reference to what Dr. Délépine had stated, it did not explain how one sample of urine should turn blue litmus red and red litmus blue, and in his experiments the blue reaction was due to ammonia, as it disappeared. Dr. Hale White's observations were on abnormal urine, whereas his were on normal. It was possible that at the body temperature the urines that Dr. Hale White had mentioned might putrefy.

Mr. EDGAR WILLETT showed specimens from, and related a case of, Malignant Disease of the Thyroid Gland which involved the œsophagus and cervical vertebræ. The case was under the care of Mr. Thomas Smith, who had kindly given permission to publish it. The specimens showed that the disease involved the neighbouring structures by direct extension. The patient was a widow aged forty-eight, and the duration was one year and three months. Microscopical specimens showing the deposit of thyroid tissue in the cervical vertebræ were also exhibited.—Mr. W. HAWARD said that, although in his case the patient had had an enlarged thyroid for twenty years, it was only during the last year that there had been a sudden enlargement, producing dyspnœa by pressing on the trachea. At the same time the secondary growths in the bone began to appear, and resembled the thyroid tissue of the original growth. It seemed, indeed, to be a case in which malignancy was engrafted on an old bronchocele of the usual benign kind.—The PRESIDENT remarked that in both cases it appeared that the thyroidal structure was associated with malignant growth, and the blending of the normal structure with malignancy was remarkable. It resembled in this the cases of osteo-sarcoma in the disseminated growths of which the osseous tissue as well as the sarcoma was reproduced.

Dr. NEWTON PITT showed a Double Hæmorrhagic Subdural Cyst, for which he was indebted to Mr. G. H. Knapp, now of Faversham, taken from a man aged forty-six, who had suffered for eighteen months with frontal headaches; at night he occasionally had twitching on the right side. The twitchings were more frequent two weeks before his death; he then became dull, apathetic, and increasingly comatose. At the inspection two thin cysts were found in the frontal region in the subdural space, with walls formed of embryonic vascular connective tissue ¼ mm. thick, containing on the right six ounces and on the left three ounces of serous fluid with recent blood clots. The dura mater was not inflamed. The cysts were attached to the dura mater, but not firmly, and were not attached to the brain. The inner surface was as smooth as that of normal dura mater. The case was a typical example of those cysts whose hæmorrhagic origin was first clearly demonstrated by Mr. Prescott Hewett in 1845. The sources of the hæmorrhage in such cases was from the degenerate cerebral veins in the wasted brains of general paralysis; from either the dura mater or the pia arachnoid when due to injury; and from the pia arachnoid when due to typhus, relapsing fever, and similar conditions producing degeneration of the blood.

Mr. J. JACKSON CLARKE showed a specimen of Myxofibroma of the Spinal Meninges from a woman aged forty-one, in whom three years before death Dr. Broadbent had diagnosed a tumour within the spinal canal, pressing on the right side of the cord and implicating the root of the twelfth nerve, and had recommended operative treatment. The growth was smooth and encapsuled. It lay within the arachnoid on the right side of the cord, which was compressed and softened. The posterior roots of the eleventh and twelfth dorsal nerves were stretched over the posterior surface of the growth, and, like the anterior roots, the denticulate ligament, the pia mater, and the dura mater, were so slightly adherent to the capsule of the tumour that they were separated by very slight strokes of a probe. The only vessels entering the tumour were a small artery and vein, branches of the right posterior spinal vessels coming off just above the point at which the uppermost fasciculus of the posterior root of the eleventh right dorsal nerve left the spinal cord. The tumour was suspended from the pia mater by these vessels like a plum by its stalk. It could have been easily removed in life after the spines and laminæ of the eleventh and twelfth dorsal vertebræ had been taken away. The chief symptoms, which were detailed, allowed of exact localisation.

Dr. HECTOR MACKENZIE showed a specimen of Syphilitic Disease of the Liver, with Gummata and extreme Pericellular Cirrhosis, from a boy aged fifteen, who had been under his care at the Royal Free Hospital. When first seen the boy gave a history of an increasing swelling in the region of the liver for nine months, of progressive weakness and loss of flesh for three months, and of jaundice for fourteen days. He had always been delicate, but had had no definite illnesses. He was small, ill-developed, and badly nourished. There was deep jaundice. The liver was much enlarged, and the surface felt irregular. The arteries throughout the body, wherever they could be felt, were hard and thickened. The case was complicated by cardiac murmurs. The diagnosis rested between malignant disease and syphilis, and the existence of arterial sclerosis lent probability to the latter diagnosis. There were no signs of congenital syphilis, either in the teeth, eyes, or conformation of the head, and the family history threw no light on the case. Syphilis seemed so likely that treatment with iodide of potassium was commenced at once and was continued for four weeks. The patient felt better while taking the medicine, but no noticeable change was observed in the intensity of the jaundice or in the size of the liver. His weight remained stationary. After a fortnight's interval, iodide of potassium was again ordered, at the patient's request, as he said it suited him best of all the medicines he had tried. He took it for nearly four weeks, and again it was suspended, because a papular rash had developed, which was attributed to the iodide. As he seemed to miss it, after ten days it was again ordered for him, and he took it until a short time before his death. No very marked change occurred. Towards the end the heart began to fail, and albuminuria, dropsy, and ascites developed. He died fifteen weeks after admission to the hospital. At the post-mortem examination the liver was found to be uniformly much enlarged. Its surface generally was smooth, but was indented with two deep scars. The gall-bladder was much distended with colourless fluid, and its duct was obstructed. The common bile duct and its branches were much dilated, and contained green inspissated bile. On section the liver was found to be permeated by fibrous tissue dividing the substance up into islands, which were deeply stained olive-green or orange by the bile. Microscopic examination showed that there was not only great overgrowth of connective tissue surrounding the lobules, but also in the lobules themselves, a condition which had been appropriately called peri-cellular cirrhosis. The cardiac murmurs were explained by the presence of congenital malformation of the aortic valve, there being only two curtains instead of three. Cases of peri-cellular cirrhosis of the liver were undoubtedly rare, but such cases had been brought before the Society on several occasions, especially by Dr. Penrose and Mr. Charters Symonds. All the previous cases recorded in the Society's Transactions had been from infants of a few weeks old, while the present case was from a boy of fifteen. The condition, as was to be expected, was much more extreme than that found in infants. The combination of gummata with this form of cirrhosis had not been previously recorded. Gummata, indeed, were not of very frequent occurrence in the congenital form of syphilis, as this might be taken to be. While from the nature of the case little good could be expected from iodide of potassium, it was interesting to observe the high esteem which the patient had formed for himself of its therapeutic value from his own sensations. It had probably prolonged his life, and had the disease been less extensive would likely have saved it.—Dr. G. N. PITT had had a case under his care during the summer which resembled closely that described. It was that of a boy aged sixteen, who was undergrown, with evidence of congenital syphilis. He suffered from ascites and œdema of the abdominal wall; the liver was large, and he gradually deteriorated in health and died.

Dr. ROLLESTON showed the heart and pericardium of a child aged nine months who died with Tubercular Meningitis, on whom there were caseous tubercles in lungs, spleen, mesenteric and bronchial glands, the latter adherent to the pericardium. The pericardial sac was greatly enlarged and almost concealed the lungs when the sternum was removed. Externally it was red and rough. When opened, about three ounces of clear, yellowish fluid ran out. The parietal layer of the pericardium was everywhere greatly thickened, and so rigid that it did not collapse. Anteriorly, there was a raised, thicker area, into which blood had apparently been extravasated. There were no adhesions between the visceral and parietal layers, the cavity of the pericardium was distended, and the layers kept apart by the chronic effusion. Microscopically, the thickened parietal pericardium was seen to be composed of newly formed fibrous tissue, containing numerous small distended blood-vessels, and between the latter small tubercles, on which giant cells were frequent. Dr. C. Slater reported the presence of tubercle bacilli, mainly in the giant cells, but also between the surrounding small cells. Dr. Rolleston referred to cases of tubercular pericarditis described by Trousseau in the New Sydenham Soc. Trans. and by Dr. Bristowe and

Sir D. Duckworth in the Pathological Society's Transactions—Dr. VOELCKER asked the author if he drew a distinction between tubercular pericarditis and tubercle in the pericardium. He had had twelve cases of tubercle in the pericardium in 360 post-mortems at the Children's Hospital, but in only one was there pericarditis with lymph effusion.—Dr. ROLLESTON, in reply, said that he had carefully distinguished between tubercle in the pericardium and tubercular pericarditis with effusion.

The following card specimens were shown:—Dr. H. D. ROLLESTON: (1) Secondary Epitheliomatous Growth in the Heart; (2) Malformation of Heart; (3) Colon Pigment from Mercury.—Dr. ABRAHAMS: Feet of a supposed Leprous Duck from South Africa.—Dr. J. A ORMEROD: Specimens illustrating Disease of the Spinal Cord.

MEDICAL SOCIETY OF LONDON.

The Pathology of Influenza.—Influenza as a Cause of Mental Disorder.

AN ordinary meeting of this Society was held on Nov. 2nd, the President, Dr. Douglas Powell, in the chair.

Dr. JULIUS ALTHAUS read an elaborate communication on the Pathology of Influenza, with special reference to its neurotic character, which will be published in a future number of THE LANCET.

Dr. G. H. SAVAGE then read a paper on the Relationship of Influenza to the Neuroses. He said that, whatever was the origin of influenza, there was no doubt that the nervous system was seriously affected during the process, and might suffer from after-effects. In former epidemics writers had described the occurrence of hysteria, hypochondria, and various other forms of mental disorder, generally of a low or depressed type. Several writers had more lately considered the after-effects of the recent epidemics; but this had not yet been done in England, though many independent writers had reported instances. He did not claim any originality in describing neuroses as following upon influenza; but there was sufficient interest in the cases to justify his putting together his experience. He had been assisted by the contributions of their experience by Drs. Mickley, Caldecott, Wiglesworth, and Bonville Fox. Influenza seemed to attack the sane more than the insane population of asylums, as was shown by the statistics of Morningside Asylum, Edinburgh. It was equally marked by neurotic symptoms, such as neuralgic pains in limbs, &c., in the nervously weak and the strong; but the true neuroses rarely appeared except in persons who were by heredity, previous attacks, or other causes, such as constitutional syphilis, in a state of nervous instability. The after-effects had no distinct relation to the severity of the disease. The period at which the symptoms developed varied very considerably, so that in many cases it was hard to be quite sure as to the causal relationship between the influenza and the neurosis. In some cases, indeed, it was only by inference that one could give influenza as the cause, but he thought that if in a certain number of cases a direct relationship could be traced between them, and if in certain other patients previously healthy, but who had had influenza, a similar train of nervous symptoms followed, though, after a period of apparent recovery, one was justified in saying that there might be a causal connexion between the two, more especially as influenza was so very subject to relapse or recrudescence. The occurrence of previous attacks of insanity, the existence of alcoholism, the presence of some degeneration, such as syphilis or the menopause, the presence of neurotic inheritance, or of old brain injury, were almost necessary for the development of insanity after influenza. Any variety or form of insanity might occur, from the mildest hysteria to general paralysis of the insane. Nervous symptoms of all sorts might occur quite independently of insanity, so that there might be delirium of considerable gravity with loss of consciousness during the acute period of the disease. Simple neuroses of various kinds might arise with and after the attack; of these, the most common were sleeplessness, amnesia more or less general, neurasthenia, hypochondriacal and self-conscious feelings, neuralgia, and rarely fits of an epileptic nature. Diabetes also had been reported as a sequela. In the more developed nervous disorders he had had examples of delirious mania of a severe and even fatal type, acute mania of a simple and hysterical form, hypochondriacal and other forms of melancholia, and the self-conscious state had in some cases grown into true delusional insanity, with hallucinations of the senses. In one case a strange form of automatism appeared; in this case and in one other crime might have resulted, so that there was a medico-legal aspect to the subject as well as a medical one. In several cases general paralysis of the insane had followed directly on the influenza. In most of these cases there was evidence of signs of degeneration before the onset of the influenza, but it was after the development of the latter that the disease was discovered. There seemed to be great differences in the frequency with which severe nervous symptoms developed; for whereas some medical men had attended several hundred cases of influenza without a single case of insanity occurring, others had had quite a considerable percentage. He could not discover that the method of treating the influenza had any influence on the production of the insane disorder. Patients who as the result of influenza became insane as a rule recovered; but there were two classes in which there was great danger—those in which acute delirious mania occurred and those in which general paralytic disease was present. Some of the older patients, who had begun to lose vigour, also ran great risk of becoming permanently insane. The course of the disorder was marked by frequent relapses, and was often tedious. Referring to treatment, he said that he had found attention to general conditions was of the most importance. Thus for a time he advocated isolation with watching (for undoubtedly many suicides had resulted during the depression following influenza), good food, sea air, and restfulness rather than travelling. He had given the various hypnotics, but found either morphia in the older cases, or sulphonal in the younger, the most efficacious. To complete the subject, he added that it was recorded that a certain number of insane patients improved while suffering from the acute disease, and that some remained well. He had voluminous tables of cases, but he contented himself with submitting typical examples of the forms of disorder he had met with. He could not sum up his experience better than by quoting that of Dr. Leledy, Interne at the Asylum at Bourges:—1. Influenza, like other fevers, might set up psychopathy. 2. Insanity might come on at various periods of the disease. 3. It might start any form of insanity. 4 No specific symptoms resulted from it. 5. The *rôle* of the influenza varied in the production of the insanity. 6. It might be the predisposing or the exciting cause. 7. In all cases there was some acquired or inherited predisposition. 8. The insanity followed from altered brain nutrition, possibly toxic. 9. The onset of insanity was often sudden, and bore no relationship to the severity of the influenza. 10 The curability depended on general rather than special conditions. 11. The insane were less disposed to take it than the sane. 12. It had cured psychoses in rare instances. 13. The insane might have mental remission during the influenza. 14. There was no special indication in the treatment. 15. Influenza might lead to crimes and medico-legal issues.

On the motion of Dr. Sansom, seconded by Dr. B. W. Richardson, the debate on these papers was adjourned to a future meeting of the Society, the date of which will be duly announced.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

THE first meeting of this Society was held on Oct. 8th, Mr. W. F. Favell, M.R.C.S., President, in the chair.

In delivering the presidential address of the session, Mr FAVELL said it was curious to look back over a long series of years and recall the changes which had taken place in medical and surgical practice—to see how one mode of procedure had given place to another, which again, after a certain run, had been suspended, and not unfrequently some old discredited form of treatment again brought into fashion. In no branch of surgical practice was this fact better illustrated than in the treatment of fracture of the skull. Mr. Favell then alluded to the revival of the use of the trephine in such cases, and quoted a passage from the "Surgery" of Percival Pott, showing that the principle he laid down nearly a century ago was that the use of the trephine was indicated in most cases of fractured skull, not only for the relief of symptoms of compression but as a preventive against future mischief. Since Pott's time great changes of opinion had taken place on this point. Some twenty or thirty years ago, at Pott's own

hospital, St. Bartholomew's, it was almost a tradition that it was fatal to meddle with fractured skulls by operation, and Mr. Bryant in his "Surgery" had stated, on the authority of Mr. Callender, that elevation of depressed bone or trephining for fracture had not been practised there for six years. The fatality after operation, when this had been deferred until symptoms of compression arose, was probably due to the presence of effused blood or serious laceration of brain; and in all probability such cases, if left alone, would have died. Hence the operation of trephining got the credit for a fatal result which would have occurred without it. Mr. Favell said he had seen cases in which he firmly believed operation might have saved life if resorted to early, where it had failed to do so when delayed until serious brain symptoms had set in. He had seen lately, at the infirmary, cases of most extensive fracture and serious damage to brain substance get rapidly well when depressed or detached bone had been at once removed and all sources of irritation taken away. At the present time the trephine was again being freely used. We trephined for epilepsy, for tumour of the brain, for mastoid abscess, for fractured skulls; and he believed we often erred on the side of doing too little rather than too much. He considered the amount of depression present should determine the question of operation in the absence of symptoms of compression. Mr. Favell then spoke of the great changes he had seen in the treatment of wounds and dressing of fractures, stumps, &c. He had seen amputation stumps almost hermetically sealed up with plasters, lint, &c., in his younger days. He had seen this plan give way to the simplest form of dressing, as advocated by the late Mr. Teale of Leeds, who treated his stumps by carefully placing them on a pillow, with only a soft towel placed over the stump, so as to give perfect rest to the part and every facility for the removal of discharges. Again, he had seen this simplicity in treatment give way to the most elaborate methods. Mr. Favell then gave a very graphic description of the battle royal which took place between the operator and germs at all operations under the spray *régime*. It soon, however, became apparent that the long-continued play of an irritating fluid over an open stump did not improve it, whilst its effects on the peritoneal cavity were found to be occasionally most disastrous. Sometimes even the operator suffered, for a celebrated ovariotomist had told him that on two or three occasions he had suffered from profuse hæmaturia after using the spray. Now this was discarded, and he only mentioned it as one of the curiosities he had seen in his time in surgical treatment. We had, however, learned two things from the germ theory and the teaching of its advocates—first, the value of as absolute cleanliness as possible, and of judicious drainage in the treatment of wounds; secondly, that by these means we could ensure such a condition of wound as bacilli could not fructify in. We were, however, at the present time apt to be too anxious and too officious in our treatment of wounds and injuries. There was such a thing as over-treatment, of being too meddlesome in surgery. He liked to see stumps, or fractures, or wounded limbs placed in such a position that discharges could be removed and proper cleanliness observed with the least possible disturbance; dressings so applied that they could be changed with as little movement of the injured limb as possible. He did not like to see an over-anxious, or over-curious, or over-particular surgeon constantly meddling with a wound to see that no germs got in. As an example of the value of the lessons we had learned from the antiseptic treatment, he cited the confidence with which we now removed a loose cartilage from the knee-joint, an operation which was formerly performed with the most elaborate safeguards, in two stages, the capsule being first opened subcutaneously and the cartilage extended into the cellular tissue, and only removed after time had been allowed for the wound in the capsule to heal.

A vote of thanks to Mr. Favell was proposed by Dr. Martin and seconded by Dr. Gwynne.

LIVERPOOL MEDICAL INSTITUTION.

A MEETING of this Society was held on Oct. 22nd, Mr. Mitchell Banks, President, in the chair.

A Scolio-rachitic Pelvis and Basilysed Head were shown by Dr. BRIGGS. A case of successful Porro's Operation for Rickety Deformity was also narrated by Dr. Briggs. A case of Cirsoid Aneurysm (patient) and one of Aneurysm at the Root of the Neck were shown by Mr. CLEGG. Two cases of Pyæmia from Otitis Media, arrested in one by ligature of the internal jugular and scraping out the lateral sinus, were related by Mr. RUSHTON PARKER. And a case of Malingery, in which milk had been mixed with his urine by the patient, was related by Mr. LARKIN.

The Ringworm Fungus.—The paper of the evening, under the above title, was read by Dr. LESLIE ROBERTS. He said that the inquiry into the character of the fungus had suffered from being conducted in too narrow a spirit. The fungus belonged, he believed, to the ascomycetes—an order which included some well-known insect-destroying fungi, such as Botryles bassii and Cordyceps militaris. His cultivation of the trichophyton, obtained from various parts of Europe and England, had led him to the belief that probably there existed distinct species. Certain well-marked race differences were presented by the French, German, Austrian, and English varieties of the fungus. A number of pure cultivations of the fungus were demonstrated in proof of the opinion which Dr. Leslie Roberts advanced. The paper afforded a view of the present position of the trichophyton question, and included a brief account of the life history of the fungus so far as is known.

A short discussion followed.

Reviews and Notices of Books.

My Personal Experiences in Equatorial Africa as Medical Officer of the Emin Pasha Relief Expedition. By THOMAS HEAZLE PARKE, Hon. D.C.L. Durham, Hon. Fellow, Royal College of Surgeons, Ireland, &c. With Map and numerous Illustrations. London: Sampson Low, Marston, and Co. Pp. 526.

THIS exceedingly interesting volume is the journal of Dr. Parke's proceedings during the period of his connexion with the Emin Pasha Relief Expedition, and may be regarded as in some measure supplementary to Mr. Stanley's volumes on "Darkest Africa." Dr. Parke tells his story with much vivacity, and gives many striking pictures of African life. He was induced to undertake the journey by meeting Major Barttelot, who had been directed to obtain some Somali boys for Mr. Stanley, and who told him that the object was to find Emin. On Surgeon Parke asking who Emin was, he was told that "he was some chap who wanted to get out of Africa, and couldn't," whereupon Surgeon Parke immediately agreed to try to obtain the appointment of medical officer. He was at first refused by Mr. Stanley, but subsequently received a telegram asking him to join. He obtained leave of absence from his superior officer, Surgeon-General J. O'Nial, and on Feb. 3rd, 1887, started for Suez, meeting Mr. Stanley at the Zagazig Station. On Feb. 21st the party arrived at Zanzibar, being composed of Mr. Stanley, his servant, 7 British officers, 623 Zanzibaris, 62 Soudanese, 13 Somalis, and Tippu Tib and his followers, to the number of 97. Small-pox soon broke out, and was met and conquered by vigorous vaccination. From Zanzibar they steamed to Cape Town and on to the mouth of the Congo, which they reached on March 18th. Dr. Parke gives a graphic account of the ascent of the Congo, which is the second largest river in the world, being navigable for a distance of no less than 8000 miles, and with a current so deep and strong that it still remains fresh and unmixed with the waters of the ocean at 250 miles from its mouth. The Somalis appeared to suffer most from the intermittent and remittent fevers of this unhealthy region, which Dr. Parke attributes to the healthiness and dryness of the region from which they come; but the officers often suffered from severe attacks, as well as some of the animals. The banks of the lower reaches of the Congo are described as beautifully wooded, and stocked with abundance of large game,—elephants and hippopotami, crocodiles, and other animals,—studded with wonderful orchids, and exhibiting many beautiful varieties of bird

and insect life. Dysentery and fevers, and attacks of natives, had reduced the numbers of the expedition to 512 on June 23rd, by which time the survivors had arrived at the river Aruwimi. Here at Yambuya Major Barttelot and Jameson were left with 129 men and 80 rifles. Mr. Stanley himself, with Dr. Parke, Mr. Nelson, and Lieut. Stairs, went forward to the Albert Nyanza Lake, and on July 1st entered the forest composed of trees whose cylindrical boles are from 100 ft. to 200 ft. high, whilst they diverge at the top into a dense mass of branches with thick foliage, intercepting much light. The difficulty of obtaining food was in many parts of the route extreme. The chickens were small and few in number, the goats tough and still less numerous, whilst Dr. Parke arrived at the conclusion that the hens never lay fresh eggs in Africa. In some parts the natives were of fine proportions, but the pleasing impression, Dr. Parke observes, was pretty well neutralised by the fact that they all had a look suggestive of wishing "to catch you and toast you immediately," which no doubt, if the chance had been given to them, they would have done without hesitation or remorse.

The dangers of the march are well illustrated by the account Dr. Parke gives of the wound received by Lieut. Stairs in a skirmish with the natives from a poisoned arrow, the head of which broke off and was embedded in his chest just below the left nipple, and close to the apex of the heart. Being unable to extract it, suction of the wound was resorted to by Dr. Parke, who then filled his mouth with dilute carbolic acid and forced it into the wound with good result, though an attack of intermittent fever with a temperature of 101° followed; and all this occurred at a time when they were lost in the forest, and absolutely without any food. At Ipoto the party were brought into contact with the Manyuemas—the dirtiest, most cruel race on earth, and withal the most shamelessly obstinate beggars that exist. Here, however, the members of the expedition did, when reduced to the extremity of hunger, obtain some food, and after considerable delay, being relieved by Lieut. Stairs, marched on to Fort Bodo, where they actually began to farm whilst waiting for Mr. Stanley, who had returned in search of the rear column. Dr. Parke gives a most interesting account of the fatal arrow poison of the pygmies, for a knowledge of the plants employed in the manufacture of which he was indebted to a pygmy woman, and he gives the results of some experiments he made with it. It is to be regretted that little opportunity was afforded of becoming better acquainted with this extraordinary tribe of little men.

Dr. Parke's journal is written throughout in a very pleasant way, and even in his direst need he still expresses himself in a cheerful, Mark Tapley style that does infinite credit to his natural courage and energy, for it is not easy to see the comic side of things when utterly prostrate and sick alike in mind and body. He speaks in the highest terms of Mr. Stanley's personal character and ability as a leader. We recommend the book to our readers as one of the most interesting narratives of adventure that has appeared for many years.

Baden-Baden as a Watering-place. By Dr. A. FREY, Consulting Physician to the Sanatorium. Translated by Dr. W. H. GILBERT, House Physician of the Sanatorium. Baden-Baden: Fried. Spies.

THIS work aims at giving in the form of a series of familiar letters an adequate account of the climate, waters, and general attractions of the famous German spa. While there is much in its pages that is interesting, we can hardly say that the author has, on the whole, discharged his task in a satisfactory manner. He indulges somewhat freely in hyperboles and roseate descriptions. We need hardly say that what we should really desire would be a sober and well-balanced estimate of the special advantages of Baden-Baden as contrasted with the numerous other important European spas. The special modes of operation of the different waters are described with a confident dogmatism which has a very slender foundation of assured fact and exact experiment to rest upon. The translation is not altogether satisfactory, solecisms in English being somewhat frequent.

Baden-Baden has the great initial advantage of being one of the most beautiful places in Europe. The elevation is moderate, about 600 ft. above sea level, there is good shelter in the pine-clad hills that surround the town, there are innumerable charming walks both on the level and on moderate inclines, and the climate is mild and temperate. The rainfall is not considerable, but the number of perfectly fine days is large. The waters are hot, the temperature varying from 114° to 154° F. They contain about sixteen grains of common salt to the pint, a small quantity of free carbonic acid, a little lithia, and a little arsenic. Dr. Frey attaches immense importance to these two latter ingredients. The chloride of sodium acts favourably on the mucous membranes of the bronchial tubes, the chloride of lithium facilitates the excretion of uric acid, while the arsenic is believed to promote digestion and nervous energy. The author details somewhat fully the general principles of diet and hygiene pursued at Baden-Baden, which seem identical with those in vogue elsewhere. Baths form the most important part of the treatment at Baden-Baden, and seem to be organised on a scale of great completeness and luxury. The treatment includes ordinary hot baths, Wildbäder, moist inhalations, Swedish gymnastics and massage, hot air and steam baths, &c. As regards the diseases most likely to benefit by a resort to Baden-Baden, Dr. Frey places gout first. Gouty patients both drink the waters and use the baths, especially the transpiration baths. The author gives us no sufficient particulars regarding the class of cases most likely to do well at Baden-Baden, nor does he supply any clinical details. Rheumatism finds the second place on his list. We should think the climate of Baden-Baden hardly dry enough for such cases. Scrofulosis comes third, and Dr. Frey is very enthusiastic regarding the results obtained in this malady, results which he attributes mainly to the arsenical constituents of the waters. He draws attention to the well-known division of scrofulous patients into those with big heads, coarse features, swollen noses, thick lips, and large abdomens, and those characterised by slender figures, weak muscles and bones, thin transparent skins, soft flaxen hair, blue eyes, and bluish sclerotic. For the former class he thinks sea air and sea bathing indispensable, while he claims brilliant results in the latter class for the climate and waters of Baden-Baden. Certain cases of chlorosis are said to do well at Baden-Baden—viz., the cases which are unsuitable for iron, but which benefit by a course of arsenic. Oertel's *terrain cure* for corpulence and cardiac affections is carried out systematically at Baden-Baden, and excellent results are claimed for it. Among the other affections treated at Baden-Baden are enumerated the following: malarial cachexia, syphilis, mercurialism, the morphia habit, bronchial catarrh, asthma, emphysema, gastric catarrh, gall-stones, tabes dorsalis, and some of the diseases of women. There can be little doubt that the good results of treatment at Baden-Baden are in no small degree attributable to the general climatic and meteorological characteristics of the place—to its mildly bracing air and the ample provision made for the hygiene and comfort of those frequenting this charming resort.

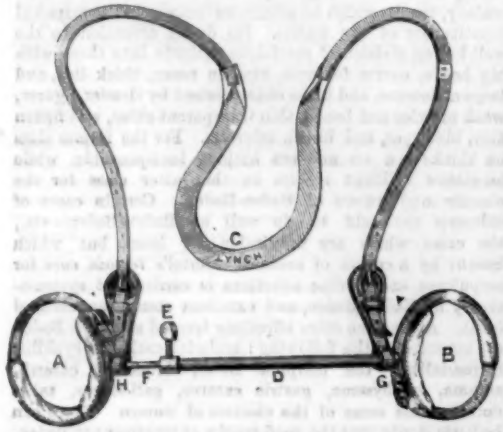
Dictionary of National Biography. Edited by LESLIE STEPHEN and SIDNEY LEE. London: Smith, Elder, and Co., Waterloo-place. 1891.

THIS important work has now reached the twenty-eighth volume, and as yet not quite one-third of the letters of the alphabet have been dealt with. We have frequently spoken of the ability which the authors to whom the various biographies have been handed over for treatment have shown in dealing with them. Since our last notice we have now the groups of the Herberts and the Herveys, and a large number of names under the Heywoods and the Hills. The length to which the work has already extended is striking evidence that the biographies it purports to give are not dealt with in the usual epitomised encyclopædic form, but while presenting its matter in an interesting form, and generally in a polished literary style, it clinches its statements, after the fashion of the Shorter Catechism issued by the Westminster Assembly of Divines, by giving references to the books, the chapters, and the pages from which the statements may be substantiated. It is thereby rendered trustworthy, and will afford a ready means of reference to biographical literature. A confirmation of this statement will be found by referring to the name of David Hume, the Scottish philosopher and historian, about whom and whose works so much has been written. The article in the National Biography from the pen of Leslie Stephen, one of the editors of the work, extends over twenty-one columns, while the list of references takes up nearly a column. The feature of completeness is also characteristic of most of the other articles in the present volume.

New Inventions.

IMPROVED CRUTCH FOR USE IN OBSTETRIC OPERATIONS.

THE accompanying illustration represents an improved crutch for placing patients in the lithotomy position. It consists, as will be seen, of two leg pieces, A and B, which are screwed upon the rod F and the tube D at the points H and G. These leg pieces fasten round the legs just below the knees.

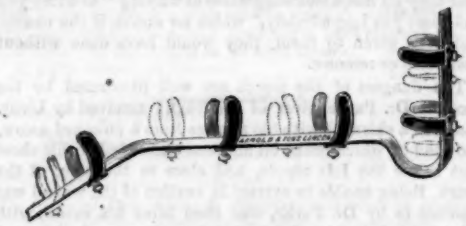


The long strap C passes over one shoulder and from under the other. This arrangement is better than passing it under the patient's neck, in which position it interferes with respiration. The rod F slides in the tube D, and can be readily fixed by the screw E whenever the knees are sufficiently separated. In perineal operations the screw should be loosened before tying the sutures and the knees brought closer together. This instrument was shown by me in the Obstetric Section at Bournemouth, where it was highly commended for its convenient form and for possessing the advantage that it can be rolled up, so that it may easily be placed in the pocket or any small handbag. The cost of it is much less than that of the old form of crutch. The makers are Lynch and Co., Aldersgate-street, London, E.C.

MURDOCH CAMERON.

NEW SPLINTS, WITH ADJUSTABLE RESTS, FOR THE TREATMENT OF INJURIES.

HAVING invariably experienced considerable difficulty in treating cases of compound fractures and other complicated injuries by means of the ordinary surgical splints, I have devised an appliance which has proved satisfactory, in so far as it allows the wounds to be dressed without removing the injured part from the splint, which is a most important matter in cases of compound comminuted fractures. It matters not where the wounds exist on the injured part,



for the rest can be moved up and down and fixed at any given point. The splint is an ordinary bar of steel, and can be made into the different forms necessary for treating all injuries of the lower and upper extremities. The rest is also of steel, lined with felt, and is capable of being moved along with the splint, and of being fixed at any point by means of a screw. The wings of the rest can also be pressed in or out so as to adapt themselves to the shape of the limb or injured part, so that the ordinary side splints are rendered unnecessary. This splint has been made for me by Messrs. Arnold and Sons, London.

ARTHUR HERBERT BUTCHER,
Hon. Surgeon to the Birkenhead Borough Hospital.

WORK AT THE LABORATORIES OF THE ROYAL COLLEGES.

THE institution of scientific laboratories by the Royal Colleges of Physicians and Surgeons has met with deserved success. The number and variety of the researches now being carried on there are evidence of the need there was for such a central institution in London. By the adoption of a recommendation from the Laboratories' Committee, the Colleges have sanctioned arrangements for the delivery during the month of December of a short series of lectures upon the investigations that are being pursued in the laboratories. We may hope that the further step of issuing an annual volume of Transactions may also be shortly taken. The following is the list of those who are at present assisting to make use of the laboratories:—

Dr. Pavy, F.R.S., and Mr. Rowntree	Researches on Glycogen and Sugar.
Mr. D'Arcy Power	Cancer.
Dr. Howard H. Tooth	Paths of Sensation in the Brain.
Mr. Watson Cheyne and Mr. Cheatle	Tuberculous Disease.
Mr. Douglas Stanley	Cancer.
Dr. M. A. Ruffer	Immunity against Infectious Diseases.
Dr. James Galloway	Malignant Diseases affecting the Peritoneum.
Dr. A. E. Wright	Coagulation of the Blood.
Mr. R. Cozens Bailey	Surgical Treatment of Wounds of the Intestine.
Dr. Sidney Martin	The Chemical Products of Infective Micro-organisms.
Mr. T. J. Bokenham	Immunity Against Tubercle.
Mr. F. B. Jessett	Intestinal Surgery.
Dr. Cartwright Wood	Immunity against Anthrax.
Dr. Rayner D. Batten	The Artificial Production of Myopia.
Dr. A. W. Williams	Histology of certain Skin Diseases.
Dr. G. A. Heron	Tuberculosis.

THE LANCET.

LONDON: SATURDAY, NOVEMBER 7, 1891.

TIME is bringing round once more the duty and opportunity of choosing members to represent the profession directly on the General Medical Council. We may now therefore very profitably consider our position in regard to this important matter, and in order to do so nothing is more needful than a right understanding of the purposes and functions entrusted to the Council. The views even of medical men upon this subject, as was pointed out in a letter written by Dr. WILKS, and published in our last issue, would seem to be by no means as clear as they might be. In the eyes of many the Council is apparently a kind of small medical parliament or debating society, charged with powers of protest and of agitation, to be used in promoting professional interests. This is by no means a true conception of its character. It is true, indeed, that suggestion and protest are as natural to it as to any other deliberative body, but it is equally true that its essential faculty is alterative or creative only in a limited degree, and is mainly administrative. Its powers are everywhere hedged by the boundaries of the Medical Act, which was not devised for the culture and protection of a calling, but for its regulation in the public interest; and beyond the scope of that Act the Council cannot go. This fact cannot be too plainly recognised, if we would avoid the error and confusion which will certainly result from a more indulgent interpretation of its privileges, and especially from an assumption of its combative powers. To maintain at a proper level the average of education of professional fitness and of professional propriety, as guaranteed by registration, these are no doubt the whole functions of the General Medical Council. How far these functions may admit of modification in details or of extension it is impossible now to say. It may naturally be expected that a body which claims to represent the collective opinions of a class will increasingly become the channel of communication between its members in their corporate capacity and the Legislature. Such matters, for example, as reform in the public medical services, the regulation of curricula, or the selection if needful of medical state councillors, might naturally come within the sphere of its influence. We name them here, however, merely by way of illustration. For the present the Council's powers are such as we have described them in the terms of the present Act, and with these only we have now to do.

What, then, in reference to these powers, is the position of the direct representatives who act on behalf of that great professional majority—the general practitioners. Is it merely that of men who advocate the protection of class privileges? Assuredly not. In respect of education it is exactly similar to that of Crown-appointed nominees or those elected by licensing bodies. There is this additional difference only—and it is entirely in their favour and the interest of good training and good service—they watch the practical outcome of what the schools teach, and their suggestions, we take leave to say, Dr. STRUTHERS notwithstanding, are, though not on this ground alone, of the highest value alike to the nation as a whole and to the guardians of its health. Of no less consequence is their other great sphere of usefulness, that which has to do with maintaining in assured stability the standard of professional qualification and the code of professional morals. The furtherance of both of these purposes ought to be well within the power of most practitioners, and it is an object which cannot but appeal to their every instinct of fairness, of duty, and even of mutual self-interest. It is not a matter which any one of them can afford to neglect or to transfer. Neither is it such that it may be lightly undertaken. General practitioners, each and all, if it were from no other motive than the instinct of self-preservation, must bestir themselves in this work of direct representation. We ask of them no more than this, that in choosing their spokesmen for the Council they will accept the nominees or proposals of no clique or party, but will be guided only by evident proofs of fitness on the part of the candidates for the work they have to do.

Fortunately their judgment in selection is not likely to be tried by the conflicting claims of many rival candidates. There is a pretty general and a well-founded impression that the successful candidates of the last election should be entrusted with a second tenure of office. In a record of effective service in the past such as they can show, we have the best possible guarantee of future usefulness, and it is highly significant of the quality of that service that during its continuance, as now at its close, no serious complaint or adverse criticism of its character is heard in any quarter. We should indeed be pleased to see somewhat more of intelligent criticism; such treatment could never prove hostile to candidates of established worth. Ideal members, of whom Dr. GLOVER may be taken as a type, are such as are daily engaged in the ordinary work of general practice, and widely respected in their allotted spheres of labour—men not merely of intelligence, but of cultivated intelligence; not merely of ability, but of trained and ordered capacity; men of judgment and constructive influence. It is such men that we want to represent us as practitioners. It is such men only who can so adjust our fair claims and our urgent needs to the possibility of their legal accomplishment, as to gain for them that support in the Council and the Legislature without which their satisfaction, their very appreciation even, need hardly be thought of. Of like quality are those whose names have been associated with Dr. GLOVER'S. Sir WALTER FOSTER, Mr. WHEELHOUSE, Dr. BRUCE, and Dr. G. H. KIDD, it is true, are not now in the ordinary sense general practitioners, though far removed in their modes of practice from the narrow gauge of specialism. Their services are, nevertheless, for several reasons, much too valuable to be dispensed with or to be lightly transferred to other hands as yet untried. Their personal association with the work of teaching confers upon them an authority in regard to education to which comparatively few general practitioners and certainly none of their possible opponents in the coming election can lay claim. Even those who regard the proposed certification of efficient midwives as opposed to the interests of the medical profession may rest assured that the present representatives will not suffer any merely philanthropic theories even in so small a matter to override their instructed sense of justice.

Finally, each of these gentlemen is an expert in that personal culture which confers authority on counsel. Each will resume, if re-elected, his representative duties armed with the wisdom of experience, with the threads of unfinished work in his hands, and with definite ideas as to how it may best be carried through. While, therefore, we yield to no one in maintaining the natural right of general practitioners to be represented by working members of their own body, we must also assert our conviction that their present representation cannot under present conditions be improved upon. A few years hence, when fuller knowledge of a work still new to most practitioners has developed a deeper professional interest and a greater facility in the business of the General Medical Council, we may confidently expect to witness the coöperation of a solid phalanx of members recruited directly from general practice. We are no less desirous to see the dimensions of this body enlarged. According, however, to our reading of the provisions of the Act, this is possible only to the extent of electing one additional member for each division of the United Kingdom. However the desirable enlargement referred to may best be brought about, we look forward with hope to its ultimate realisation. Meanwhile we feel we shall best prepare the way for its accomplishment by advocating as we have endeavoured to do the re-election of the present representatives who have already proved their capability. In view of the fact that it is generally conceded that they have rendered the profession true and able service of no mean order, it appears no more than an act of due courtesy, and of wisdom as regards the work now waiting, to return them for a further statutory period as direct representatives.

As the discussion at the annual meeting of Fellows and Members of the Royal College of Surgeons of England on the mode of procedure at general meetings and on consultations of the corporate body may necessitate the consideration of these subjects by the Council, we think the occasion opportune for urging the desirability of concessions to the reasonable representations of the constituency. Is anyone, either in or out of the Council, perfectly satisfied with the present conditions under which meetings are held, or the mode in which the corporate body is consulted? As regards the general meetings, we venture to assert that the majority of the Council sit upon thorns when they are clustered in the well of the theatre, and are the silent recipients of the shafts which the speakers in the body of the theatre are wont to discharge at them. Occasionally the tension becomes too great for silence, and a member of the Council rises indignantly to break the chains which bind him, and to repudiate some suggestion which sounds more than usually objectionable. The position of the Council much resembles that of the Senate of ancient Rome when BRENNUS and the Gauls burst into the city, save that it is at once less dangerous and less dignified. It is essentially a false and anomalous position. The Council seem to be placed in a moral pillory, and to be a passive target for any missiles that may be thrown at them. They would fairly be deserving of pity if it were not entirely within their own power to alter the conditions under which the general meetings are held. Such meetings most nearly resemble the meetings of Convocation at the University of London, and how much more satisfactorily are these latter meetings conducted. Members of Convocation have their own rules of procedure, elect their own chairman and clerk, can accept or reject charters, make representations to the Senate, and appoint a standing committee, called the Annual Committee, to look after their interests in the intervals between their meetings, to make investigations, and to report on any subject of interest. The members of the Senate who are members of Convocation sit with the other graduates. When they have anything to say they say it, and they are not above using their best efforts to convince Convocation of the justice or expediency of the views to which they lean. Each member of Convocation has to pay a subscription or a life composition fee, and each member receives regularly the agenda and the minutes of the meetings. The system works admirably. Why cannot it be applied to the meetings at the College? There is no fixed antagonism between the Senate and Convocation, for the latter body is represented on the Senate, and its views, if right and reasonable, are sure to prevail, although it has only the power to recommend, and cannot enforce its decisions. At the present time the majority at the general meetings at the College are in distinct opposition to the Council. At every meeting some hostile resolution, or some censure, or some motion expressive of regret is carried. There are no minutes; the meetings, though regularly established, are held only on sufferance; the Fellows and Members cannot elect their chairman, or levy any subscription for current expenses, or appoint any committee. The functions of such committees are discharged by independent associations like those of the Fellows and the Members, and these associations, necessary as they are under existing circumstances, cannot represent the whole of the Fellows and the Members as an annual committee appointed at the annual meeting would represent them. A party colour is unavoidably imparted to voluntary associations. These remarks will suffice to indicate the directions in which we think changes may with advantage be made at the College of Surgeons, and we would add a few words in reference to the times and seasons at which the Fellows and the Members should be consulted. We set on one side for the present the question of separate meetings of the Fellows, because it is generally recognised that nothing can be done until the pending action is finally settled; but meetings of the corporate body go on, and will go on, whether the action is settled in a few weeks or lasts for years. And on this subject there is one observation to be made which will at once occur to everyone who has given any attention to the matter. It cannot fail to have been noticed that the Council of the College almost invariably call these general meetings, to use a colloquial phrase, "the day after the fair." They are always too late. They decide questions first and ask the opinions of their constituents afterwards, or they summon them when it is too late for any decision at which they may arrive to influence the ultimate result, or they do not consult the constituency at all on questions of immense importance to them and to the profession, and thus often run exactly counter to the general set of opinion in the ranks of the profession. The constituency have not been consulted on the extraordinary

expenditure at the College; they have not been consulted about the professional curriculum; they have not been consulted about conjoint schemes of examination; they have not been consulted about the policy to be pursued towards the Society of Apothecaries. These omissions have led to much inconvenience, to the loss of benefits which might have accrued, and in the last case to mischief which now seems to be incapable of being eradicated. During the last few months the constituency have twice been consulted too late, and on the first occasion a resolution was passed expressive of serious regret. They were consulted too late in regard to the scheme for the reconstitution of the University of London, and the Fellows and the Members said: "This meeting regrets that the Council of the College has not seen fit to place before the Fellows and Members the scheme for the reconstitution of the London University before formally accepting this scheme in the name of the College." It was consulted too late in regard to the scheme for the new University, for it ought to have been consulted whilst there was time for the College to accept representation on the Council of the University if the constituency desired it, and the meeting would then have been held when the Fellows and the Members interested in the question could have been present to discuss it. If no hostile resolution was passed, it was because few understood the question, and those who did were not of the same opinion concerning the representation of the College. The Council are pursuing the proper policy in calling general meetings on important topics, and if henceforth they will summon them before instead of after they have come to a decision, and if they will summon them when any change of consequence in the external relations of the College is contemplated, they will do much to restore good feeling in the constituency and to place themselves in harmony with the prevalent feelings of the Fellows and the Members.

THE fame of the Cape as a health resort is not of recent growth. In the old days of our Indian Empire, long before the Suez Canal was projected, and when connexion with the East was maintained exclusively by sailing ships round the Cape of Good Hope, Cape Colony was the favourite recruiting ground for our countrymen exhausted by the toils or climate of Hindostan. The Suez Canal and steam have altered all this, and the Cape has suffered in consequence. It is once more becoming known as a health resort, in consequence of that widespread movement of travel which is now making all parts of the world familiar, and turning their special features to advantage not only for commerce and adventure, but for health. The broad features of the Cape climate are as follow: Great dryness, clearness, and rarefaction of the atmosphere; abundance of sunlight; considerable maxima of heat, which are nevertheless free from depressing effects and consistent with vigour and activity; cool nights; a considerable proportion of wind; a long summer and winter, with a correspondingly short spring and autumn; much dryness of soil and scantiness of forest and vegetation. The health record is, on the whole, good. There is no yellow fever or cholera. Pulmonary affections are alleged to be relatively somewhat infrequent. Hydatids, so frequent in Australia, are rare. Rheumatism and neuralgiæ are frequent. Speaking generally, accommodation and means of communication are bad, but appear to be undergoing a steady change for the better.

The above features are more or less generally true, but no account of Cape Colony can be at all accurate unless a careful distinction is made between the various districts into which the country naturally divides itself. These are: (*a*) the coast region, including the littoral districts and the adjacent interior to an elevation of 1000 feet; (*b*) the midland plateau, embracing the districts of elevation from 1000 to 2500 feet; and (*c*) the upper plateau, which includes the districts of elevation from 2500 to 5000 feet. The coast climate is relatively warm, moist, and equable; the midland climate cooler, drier, and more genial, but with a greater range of temperature; and a mountain climate drier still and more bracing, but with much greater extremes of temperature, cold nights and hot days, the mean range being more than double that of the lower or coast plateau. Port Elizabeth, Graham's Town, and Aliwal North may be taken as representing the three types of climate. The first has an elevation above sea-level of 180 feet, the second of 1800 feet, and the third of 4330 feet. The mean summer temperature of the first is 66·8°, of the second 63·1°, and of the third 67·4°. The mean winter temperature of the first is 59·5°, of the second 53·1°, and of the third 48·8°. The mean range of temperature is 14·6° (summer) and 14·1° (winter) in the first of these regions, 17·7° (summer) and 12·8° (winter) in the second, and 34·4° (summer) and 34·2° (winter) in the third. The rainfall is 19·99 inches in the first, 29·59 in the second, and 22·86 in the third. The comparative humidity of the air is 75 (summer) and 80 (winter) in the first, 74 (summer) and 77 (winter) in the second, and 55 (summer) and 77 (winter) in the third. We need not dwell on these figures, of which the significance is obvious. The contrast between the relative humidity of the air and the actual precipitation of rain must be noted.

The greater part of the central regions of Cape Colony is known as the Great Karoo, an elevated plateau. For purposes of description, it may be divided into a lower and an upper region, the former having an approximate average level of 3000 feet, the latter including regions of an altitude varying from 2700 to 6000 feet, one point, the Compassberg, 7800 feet, being the highest point in Cape Colony. The climate of the Great Karoo, while necessarily varying with the elevation, is characterised by extreme dryness and severe and prolonged droughts, the rainfall being everywhere very small; intense heat in summer; cool nights, owing to the energy of radiation; absence of cloud and dust storms. The winter is the best time. At this season the nights are very cold, but there are usually several hours of bright, sunny weather between 9 A.M. and 3 P.M.; the air is remarkably clear, bright, and bracing. The snowfall on the plains is usually slight. Phthisis is alleged to be extremely rare on the Karoo Plateau. Accepting this fact, it is still a question whether the exemption is due mainly to climatic causes, or rather to sparseness of population and the active out-of-door life pursued by the inhabitants.

The general features of Cape Colony as a sanatorium may

be conjectured from the above brief outline of its physical and meteorological characteristics. The coast line is not, as a general rule, to be recommended, but the interior affords a good type of a peculiarly dry, bracing, exhilarating climate, the elevation being everywhere considerable, and the climate hence sharing the features of the dry inland and the mountainous resorts. The accommodation is, on the whole, inferior, and the means of communication leave much to be desired. Among the places deserving of special recommendation to travellers for health may be mentioned: Graham's Town, a great educational centre with considerable natural beauty and a fine climate; Queenstown (3500 feet elevation); Cradock (elevation 2856 feet); Beaufort West (same elevation); Aliwal North (elevation 4348 feet); Tarkastad (elevation 4280 feet); and Burghersdorp (elevation 4650 feet). To determine the relative merits of these various resorts for different classes of cases would be a matter of some difficulty. Pulmonary cases would do well, in the first case at least, to leave the coast as soon as possible, and try one of the moderately elevated resorts, such as Graham's Town or Cradock. The results of residence and treatment there should determine the invalid's further course. It cannot be too clearly laid down that Cape Colony is wholly unsuited for advanced and broken-down cases of disease. It is the fairly hardy patient, whose general vigour is still moderately well maintained, and who is prepared to "rough it," that may most confidently be recommended to make trial of the Karoo Plateau. Cradock, Beaufort West, and Burghersdorp have some special repute in the treatment of phthisis. Cases of chronic pneumonia, or of pulmonary collapse after whooping-cough, are said to do well at Aliwal North and Tarkastad. Cases of chronic bronchitis and asthma are said to benefit by the climate of the Karoo Plateau, but in such cases no general rule can be laid down. Probably bronchitic patients with profuse expectoration would benefit by the dry warm air of this region, but dry and irritable bronchitis would almost certainly be aggravated by it. Asthma, although much influenced by climate, is so erratic a disease in this respect that hardly any general principles can be formulated regarding it. South Africa has been much recommended for cases of nervous break-down, and there can be little doubt that many such cases may be expected to benefit by a well-planned trip into the interior, the complete change, novel conditions of existence, and open-air life being all favourable. But it is well to remember that the South African climate is too stimulating for cases in which irritability or great exhaustion is a prominent feature. The brilliant sunshine, absence of cloud, great range of temperature, and the discomforts to be anticipated, render the Karoo Plateau ill adapted to such cases.

Of the voyage to the Cape we need not speak at length. It can now be accomplished in from fifteen to eighteen days, and the accommodation on shipboard is good. The run is about 6000 miles, and takes the traveller through many degrees of latitude and through much variety of climate. As a general rule, the heat of the tropics, although disagreeable, is not injurious to the invalid, and the voyage is one of the most interesting and attractive of the shorter trips. It is hardly sufficiently long to anticipate much benefit from it in pulmonary cases, but it forms a pleasant and useful preliminary to a prolonged residence in the interior of Cape Colony.

Annotations.

"Ne quid nimis."

THE ALBERT UNIVERSITY AND FORMER LONDON STUDENTS.

THERE is a considerable apprehension among those former London medical students who have attended their curriculum and have obtained their qualifications that they may not be admissible for the degrees of the proposed University, even if they undergo a special examination. It is absolutely laid down by the Lords of the Privy Council that no honorary degrees in medicine can be given by the Albert University. It is also clear that those students who are now in attendance will be eligible for degrees if they "shall have pursued a course of study in a college in the University during such final portion, being not less than two years, of the period of study as may be determined by the Council, and shall have passed the final examination of the University in that course of study." A qualification for registration "under the Medical Acts for the time being in force" is also essential. The Council can therefore lay down, immediately the Charter is granted, regulations for attendance on such a course of study for two years, and enforce such an examination as may be deemed advisable. Within these limits the Council has free powers; but it is a very delicate legal question whether there are any retrospective powers. The words in the Charter are "in a college in the University" (Sect. iii.), and in Sect. ii. University and King's Colleges and the London medical schools "shall be and are hereby constituted colleges in the University"—i.e., on the date on which the Charter shall have obtained the sanction of the Queen in Council. One would suppose that until then no University exists, and consequently no college in the University. It is important, therefore, that former London students should clearly understand the provisions of the Charter; but possibly a legal opinion might put another interpretation on these clauses, and if so we should be only too glad, for otherwise a very anomalous position will be created for those London students who have already obtained qualifications, and cannot give up two years for further study in a London medical school. The provisions are so entirely local that we cannot possibly see how students who have studied entirely in the provinces can be admitted. The Lords of the Privy Council laid special stress on this local character throughout the whole of the hearing, and in every part of their decision. In view of these points, practitioners whose qualifications and period of study in London fulfil the requisite conditions must take steps to have their case laid fully before the Privy Council. The question as to the legal reading of the paragraph we have quoted above is, as we have indicated, so doubtful, that they should spare no effort to have their position plainly represented to the Lords of the Council.

THE ABUSE OF HYPNOTICS.

IN an article on this subject in the current number of the *American Journal of Insanity*, Dr. Chapin, of the Pennsylvania Hospital for the Insane, calls attention to what promises to be a serious evil in connexion with the administration of that useful group of drugs to which the term "hypnotics" is applied. He gives a number of cases whose history was complicated with such anomalous and unusual symptoms as to suggest a suspicion that a form of disease

perhaps heretofore unrecognised had appeared. To his credit, however, Dr. Chapin resisted the strong temptation that existed, "with the aid of a classical dictionary, to overload still further our already congested nomenclature of insanity and neurology." For the purpose of relieving the insomnia that is such a frequent accompaniment of the incipient stages of mental disorder, it was ascertained as a part of the medical history that in these cases hypnotics in large and repeated doses had been administered, and to such a degree that a pathological state was added or superinduced that seemed clearly to result from medicines prescribed to produce sleep. In one case, where large and repeated doses of chloral and paraldehyde were believed to have produced a condition of hysterical mania, with insomnia and general hallucinatory disturbance, the patient made a good recovery under hyoscine and liberal food. In another case 180 grains of chloral had been taken daily for six weeks, along with bromide of potassium. Morphia and bromides produced the mischief in another case. "One patient now under treatment is suffering from mental hebetude, languor, and suspension of mental activity; took 480 grains of bromide of potassium every twenty-four hours for one year. She is now slowly recovering from the drug poisoning." The facts presented in the histories of these cases showed nothing very special in the early stage. Later on, however, hallucinations appeared, accompanied with restlessness, motor disturbances, and fear of impending calamity. The sense disturbance was general and active: terrible sounds and voices, dreadful apprehensions, accompanied by struggles to escape, suicidal attempts, and refusal of food. Life was sometimes seriously threatened in consequence of partial paralysis or impaired performance of functions of vital centres during the course of this "toxic delirium." The physical symptoms were noticed to be—dilated, sluggish pupil, diminished mental reflexes, a feeble heart beat, a flabby tongue somewhat pale and covered with pasty coat, and a tumid abdomen. There is, doubtless, truth in what Dr. Chapin says as to the necessity for bearing in mind, when seeking for an explanation of the occurrence of such cases, "that there is now a tendency to treat the insane privately, and it has occurred that excessive doses of hypnotics are not infrequently administered to produce quiet and prevent disturbances and noise, which would disturb a neighbourhood or others in the same house." The treatment which was found to secure a restoration to health in these cases consisted of discontinuance of the mischief-causing hypnotics, and the giving of nutritious food, quinine, tonics, and a few doses of digitalis where indicated. We commend Dr. Chapin's paper to our readers' attention.

LIFE ASSURANCE AND THE MEDICAL PROFESSION.

IT has already been mentioned in these columns that we propose next week to issue a Special Life Assurance Supplement, somewhat upon the lines of that which we published a year ago. Last year's Supplement was suggested by many proofs which had been brought to our notice of the want on the part of a large section of the profession of such appreciation of the benefit of a life assurance policy, and the duty of providing in this way for dependants, as every prudent man ought to manifest. This apathy we attribute to two causes: inattention to the subject on the part of the practitioners and ineptitude on the part of the offices in adapting their contracts to the requirements of the case. Our Supplement was accordingly intended to serve the double purpose of arousing interest on the part of our professional brethren in a matter which concerns them very nearly, and of eliciting a statement of the specific needs of medical men which would enable the life assurance offices to perceive clearly wherein their schemes might be improved in the sense of being adapted to meet the features of this given case. The result has in many respects been very gratifying, and in part has been recorded in our pages from time to time. It will be more fully set out next week. But it is not permitted to us yet to relinquish the task which we have taken in hand, for the simple reason that much still remains to be done. When our statement comes to be published next week it will be found that important advantages have been secured for medical practitioners; but these do not yet fulfil the measure of our expectations. Thus, for example, the policies issued by the various companies are so diverse in form that only by minute examination of a number of terms, conditions, and stipulations is it possible to ascertain what exactly is the ground covered by a given policy. Uniformity in this respect would bring the whole matter within the range of easy understanding. The existing diversity complicates it to such an extent that nobody knows until he receives and reads his policy what his position under it is to be, and most people not even then. This is one point which will receive due attention in our forthcoming Supplement. Others will also be included in our review, and we hope to be on this occasion as successful as on the last in the bringing together, and to an improved mutual understanding, two bodies, the medical profession and the insurance offices, which stand greatly in need of one another.

"TIC CONVULSIF."

DR. BERTHOLD BEER publishes in a Vienna journal a contribution to the treatment of "tic convulsif." He begins by stating the well-known fact that partial convulsions or involuntary muscular contractions are no rare occurrences. Clonic convulsions are frequently observed in a small lateral portion of the inferior part of the orbicularis palpebrarum. They often last for some minutes, and are generally symptoms of conjunctivitis or of slight pathological changes in the region of the palpebral margin, and in the ducts of the Meibomian glands. Many authors call these, as well as the clonic contractions of parts of a muscle, such as occur frequently in the bicipital groove, in the abdominal muscles, and in other parts, fibrillar muscular convulsions. The name is, however, really only applicable to the fibrillar convulsions after anæmia, which Sigmund Mayer described, and which may be well observed in the tongue and facial muscles of recently decapitated animals. In clonic convulsions of this kind the peripheral source of the affection may be recognised by the dilatation and congestion of the neighbouring bloodvessels and by a slight inflammation of the muscular tissue. In this form of convulsions an anatomical alteration of the peripheral tissues near the affected muscle is found, but very frequently contractions of the palpebral muscles are observed, which may be considered merely exaggerations of the normal palpebral function. The twitching occasionally extends to the facial and frontal muscles, so closely connected with the palpebral muscles, and corrugation of the eyebrows and elevation of the alæ nasi, or of the angle of the mouth, occurs. The mechanism of these contractions, which represent the simplest form of tic convulsif, and which, being merely considered bad habits, seldom come under medical observation, is of a reflex nature, resembling involuntary action. Other cases of tic of the kind which comes most frequently under medical observation may obstinately resist every treatment, until it is possible to remove the original cause of the attacks. This is generally situated in the nasal mucous membrane, the palate, the periosteum of the facial bones, or the alveolar margin. Cocaine is a most valuable remedy in such cases. In rarer cases the facial epidermis provides the means whereby the tic extends over a larger area, and in one case of this kind slight

valvular dilatations in the infra-orbital region contributed to the greater intensity and frequency of the attacks. In such cases the usual and easily excited reflex and automatic movements may be also considered, as they may be the ultimate cause of the attack. This is especially the case when the affected muscles, from a cerebral or peripheral cause, have been temporarily paralysed or weakened in their functional capacity. In such muscles reflex and automatic impulses, such as operate in sneezing, laughing, crying, expressions of fear, and others, may be stronger than in healthy muscles. An appreciable disturbance of sensibility may not therefore be present, and yet local anæsthesia of the nasal mucous membrane may cut short the attack, and tic which has been caused by cerebral conditions may be improved by peripheral treatment.

HOSPITAL AND UNIVERSITY REFORM IN GLASGOW.

PROFESSOR CAMPBELL BLACK of Glasgow, in the opening address to the students attending the Physiology class, did not use soft words in describing the need for hospital and university reform, but descanted boldly on the evils of exclusive teaching and the multiplication of classes in universities. The inquiry into the hospital system of London has, he thinks, accentuated the selfishness, and disingenuousness of human nature. Every medical institution in Glasgow but the Royal is the outcome of private medical enterprise. All the hospital appointments worth having in Glasgow are, he alleges, in the hands of about eighteen individuals, chiefly the *personæ gratæ* of the University; and he held it as a public scandal that the staff of the Western Infirmary held office for life.

THE BIRMINGHAM BOARD OF GUARDIANS.

"IT was resolved that Mr. —— be, and he is hereby appointed, assistant surgical officer, with a salary of £100 per annum, rations, washing, lodging, and attendance, and that he pay over to the treasurer all fees received by him in connexion with the discharge of his duties." Such is alleged to be a true copy of a resolution passed by the board of guardians of the parish of Birmingham in making two recent appointments on the resident staff of their workhouse infirmary. The guardians are perfectly justified in requiring candidates for these medical appointments to promise to give their services entirely to the institution, but the above resolution stipulates that fees received by their medical officers "in the discharge of their duty" shall be handed over to the guardians. Now, the only fees likely to come to the officials in question are those accruing from services rendered in the coroner's court. It has been judicially decided (Claydon County Court) that workhouse infirmaries come under the category "hospitals and public institutions," and that the medical officers of such cannot recover fees from a coroner either for making post-mortem examinations or giving evidence at inquests concerning deaths occurring at workhouse infirmaries. The only fees, therefore, which the guardians conditionally lay claim to are those connected with inquests on the bodies of persons "brought in dead." Their action seems to us wholly uncalled for if they seek to gain what would amount to purely a nominal sum per annum. There is another aspect of the question, however, that presents itself; and we shall be pleased to receive a disclaimer from the guardians that their aim is not what, on the face of their resolution seems apparent—viz., their medical officers are encouraged not to facilitate the holding of inquests on deaths connected with the institution. The resolution as reported is manifestly harsh on the medical officers, who are almost invariably allowed to retain the fees they receive in connexion with duties discharged at the coroner's court. Moreover, they regard the resolution as an indignity to the profession. We should like to hear what the Local Government Board have to say on the matter? Is the resolution good in law? We think not, inasmuch as it requires a consideration which we hold to be against the public interest.

THE PORT OF LONDON.

DR. COLLINGRIDGE has submitted to the corporation another of his interesting reports on the Port of London. During the first half of this year no fewer than 7608 vessels were inspected. Of these 6675 carried the British flag, and only 2·7 per cent. of the whole required any cleansing. Such a result is due to the long-maintained labours of the port officials, and to the educational effect of the operations which have for so many years been carried out under Dr. Collingridge's supervision. The report differs in one respect very materially from the *couleur de rose* correspondence which has recently been going on in the public press as to the sufficiency of the operations carried out by the County Council in disposing of the metropolitan sewage. To say nothing of the capital expended and of the heavy day-by-day cost already incurred or to be shortly incurred in carrying out the present scheme, Dr. Collingridge states that the nuisance continues, varying only according to such conditions as climate &c. Two or three warm days are declared to suffice to cause "foul and loathsome smell of stale and decomposing sewage," with complaint from everyone whose business carries him on the river between Greenhithe and Greenwich. This is a state of things that needs the utmost watchfulness on the part of metropolitan constituencies, who will have to see that their money is not thrown into a sewage-laden river, the waters of which remain a general source of nuisance and offensiveness.

THE CHICAGO EXHIBITION.

THE energetic manner with which the preparations for the Chicago Universal Exhibition have been pushed forward, not only in America, but in England and other countries, gives promise of great success. We are glad to note that an English Royal Commission has been appointed, and that its representatives (Mr. James Dredge and Sir Henry Trueman Wood) have been over to Chicago, and satisfactorily concluded all necessary arrangements for the participation of English exhibitors. From the medical and sanitary point of view the exhibition will certainly prove of great interest. In the first place, the organisers are particularly anxious it should be thoroughly understood that the exhibition is not merely a commercial undertaking. On the contrary, every endeavour will be made to bring together collections of a purely scientific character. There will also be a great number of international scientific congresses, which will commence in May and continue till November. A large building, destined ultimately to become an art museum, is to be erected on the lake front. In the meanwhile, the exhibition executive have offered to pay part of the cost for its erection, so that they may use it during the exhibition as a meeting place for congresses. It is anticipated that the congresses will attract so many people that provision has been made for overflow meetings. The auditorium theatre will be reserved for such emergencies, and it is large enough to hold 10,000 persons. The gathering together of so large a number of people will of itself involve many important administrative and sanitary problems. There will be at the exhibition practical experiments and tests of drainage and of the disposal of sewage. The water mains are now being laid down, and these will supply daily from forty to fifty million gallons of water

available for drainage, fires, &c. But, apart from this, pipes are being laid, some of them for a distance of ninety miles, to bring pure mineral spring waters to the exhibition for drinking purposes. In looking over the list of the 172 groups into which the objects to be exhibited are classified, many among them will be found of direct interest to the medical profession. Indirectly, America, as the granary of the world, has much to show affecting food-supply. It is to America that we are mainly indebted for the cheapness of food in England, and on this cheapness public health in a great measure depends. All that concerns the storing, tinning, preserving, and transporting of meat, fish, and corn from America is of great practical importance, and never will there be probably a better opportunity of studying these problems than that which the Chicago Exhibition is certain to afford.

OF WHAT DID SHAKESPEARE DIE?

AMERICANS are all entranced with our and their Shakespeare, for he belongs as much to those born on the other side of the Atlantic as to us born here. Go to Stratford-on-Avon whensoever you will and you are sure to find an American Shakespearian there, wild with admiration, and eager to take home the Washington Irving poker from the noted hostelry. Sometimes Americans invent strange stories, and even suggest that Bacon rather than Shakespeare wrote the famous plays which have made the name immortal. But, in spite of such occasional aberrations, they love the man and all that belongs to him; and now they are discussing once again the question: "Of what did Shakespeare die?" Following up this inquiry, a writer in the *New York Medical Record* communicates the theory that the poet died of some respiratory lesion, and that, summing up the testimony, a jury of the present day might reasonably, at a coroner's quest, return a verdict of "Death from pneumonia." The evidence on which this theory rests is very ably worked out. The age of the poet at death (fifty-two) is connected with a period of life when the mortality from pulmonary diseases is definitely increased, in proportion to other causes. His death occurred during the month of April (the 23rd), which "in England is a month of treacherous changes in temperature and in weather." Some time prior to his death, it is urged, he passed an interval of excessive conviviality, "and quite likely of deep intoxication, in the companionship of convivial friends." That means that he placed himself in a situation from which reckless personal exposure would naturally arise. "Here are three factors which favour the development of pneumonia, and the legend runs that at the last drinking bout he contracted a fever from which he died." "Fevers," says the writer, "do not come in this way; pneumonias do." The writer supplements his argument by referring to the casts from the mask of the face taken after death, from which the sculptor has copied the face of the great man. The mode of death leaves something of the character of the fatal disease on the dead face. "Sudden violent death arrests the muscles in their last contraction. From the soldier's half-parted lips the oath or battle cry seems just to have sped. The brakesman, gone to immediate death in a crush, bears upon his face the imprint of his last thought—of duty, of home, or what? The expression of lingering or wasting disease touches the physiognomy differently; death stands so near, so long, that the body becomes accustomed to his presence, and he is not unwelcome. At the end his hand is often gentle, and the features of the dead simply betoken placid rest." On the other hand, the course of death in pneumonia "is laborious." "Towards the end the expression of the face becomes like that of one who is toiling under a burden breathlessly and without rest. The close of life is the first pause from utter weariness and exhaustion," and "the characteristic pneumonic expression remains after death." On comparing the Shakespeare death mask with the face of the dead of his time of life from pneumonia the identity, the author thinks, can scarcely be mistaken. "That which Mr. Carpenter has described as a look of ineffable sadness is the true pneumonic physiognomy—the look of one who has been tired—painfully tired unto death." With this interesting and graphic description of the cause of death we are much inclined to agree. The author has not quite set forth precisely the only legend of Shakespeare's death—that, namely, written many long years after the event by Ward, the once soldier in the royal army, and afterwards the vicar of Stratford-on-Avon, with a strong liking for physic and a display of some learning of simples. The story told by Ward in his diary, still in the treasures of the library of the Medical Society of London, tells nothing about the poet's long conviviality, although the poet himself leaves much to be inferred in that line. But it does convey that just previously to his last natal day he joined some boon companions (Ben Jonson and Drayton the player) in convivial pursuits, and that the result was his death from the "surfeit." This shows a rapid death after a convivial outbreak, and supports the suggestion that the cause of death was some respiratory mischief. Nothing is more probable than that the mischief was what would be called in his (Shakespeare's) day "a peri-pneumonia, an inflammation or impostume of the lungs, with a shortness of breath." The description of the pneumonic cast of face after death is also true, and, taken in combination with the climatic conditions so faithfully noticed, adds strong and, as far as can be gathered from the facts coming down to us, all but conclusive evidence that the poet of England—some think of the world—died of that form of pneumonic disease lately named "pneumoparesis," a form apt to strike suddenly and fatally those in whom the nervous energy has become reduced; and who, exposing themselves to useless dangers, find out to their cost what the poet himself taught: "'Tis a cruelty to load a falling man."

ALLEGED "COVERING" IN BIRMINGHAM.

THE *Birmingham Daily News* of Oct. 26th contains the report of an inquest by the city coroner, Mr. Joseph Ansell, on the body of Gladys Marion Jennie Mansell, aged eight months, who was attended by one Mr. Duval in this wise. The father went to a house, 149, Ledsam-street, where on the door-plate was *Dr. Steel Scott, M.B., C.M., D.P.H.* He went in and asked to see Dr. Scott, when Mr. Duval appeared and attended the child till its death, scarifying its arms with a penknife for coma, and putting it into a bath so hot that the feet were scalded. He took money and signed a receipt in the name of Scott. After the death he represented it as necessary, to save the bother of an inquest and "going before a crabbed old coroner for two hours," that he should bring a gentleman who should view the body, whose fee would be 10*s.* 6*d.* He represented this gentleman as "his superior—Dr. Scott." At the inquest Dr. Scott admitted having three dispensaries with unqualified assistants. Mr. Beech made a post-mortem, examination, and testified to death from bronchitis and congestion of brain and lungs. The scratching the arms would do no good, though lancing the gums might have stopped the convulsions. The jury returned a verdict of death from natural causes. They unanimously protested against the conduct of Dr. Scott in employing unqualified assistants, affirmed that both he and Mr. Duval should be severely censured, and that the proper medical authorities should be advised of the case. The coroner then censured both of these gentlemen, and concurred in the suggestion that the case should be brought before the Medical Council. It is not often that we have had to remark on a case so vividly

illustrating to all appearance the evils of "covering." But as the case is likely to be referred to the Medical Council, and involves such serious questions, we think it right to defer further comment for the present.

TREATMENT OF INJURIES TO THE HEAD.

DR. SENGER of Crefeld has proposed a new method of treatment with the object of facilitating repair in suppurating wounds of the head, with exposure of the cranium. He first arrests the phlegmonous and puriform process by surgical and antiseptic treatment—that is, by incisions, drainage, and dressing,—and so reduces the complicated injury to a simple cranial wound, which of course still produces a certain quantity of pus every twenty-four hours. A wet antiseptic dressing is then applied to the wound for two or three days, and when this is taken off the first layer of the tabula externa is removed with the help of a small chisel, in little scales, until drops of blood are seen in the bone. In from two to three days granulations protrude from the bone, and entirely cover it in from eight to ten days, and healing subsequently progresses as in other wounds. Suppuration ceases in proportion to the growth of the granulations. It is also possible to produce granulations by drilling several small holes in the external table until blood is seen; but the chisel is preferable, as it is difficult to estimate the depth of the drillhole, and the drilling takes more time than the chiselling. A still more serious objection to the former is that the holes get filled up with bone dust. In neither method is it necessary to give an anæsthetic, as but little pain is felt during the trifling operation.

DR. COLLIE'S RESIGNATION.

ON Saturday last, at a meeting of the Managers of the Metropolitan Asylums Board, a letter was read from Dr. Collie, in which, in compliance with a request of the Local Government Board, he tendered his resignation of the post of medical superintendent of the Eastern Fever Hospitals, a position which he has held for the last twenty-one years. In his letter Dr. Collie alluded to the exceptionally trying nature of the official duties which he had discharged for so long a period, and called special attention to the circumstance that his health had never been satisfactorily established since the occurrence, two years ago, of an attack of diphtheritic sore-throat, which then incapacitated him from the discharge of his duties for a period of six weeks. Wherefore, on account of his long and arduous services and his failing health, Dr. Collie respectfully submitted for the consideration of the Managers his claim to a retiring allowance. It is only reasonable to expect that the Managers will not prove irresponsive to the petition of an old and valued servant, and that they will unanimously recommend the Local Government Board to grant Dr. Collie a substantial pension. A letter was afterwards read from the Chairman of the Parliamentary Bills Committee of the British Medical Association, enclosing the copy of a resolution passed by that body, expressing the hope, should Dr. Collie's resignation still be thought necessary, that, on the grounds already stated, an ample retiring pension may be obtained for him. The communication was accompanied by the copy of a petition which the Parliamentary Bills Committee have also forwarded to the Local Government Board. In this the committee solicit that the kind and favourable attention of the Board be given to their unanimous request that a favourable view be taken of the case of Dr. Collie, and that "in view of the high opinion which the Board entertain and have expressed of his great and protracted medical services, of the evident ability, acknowledged devotion to his duties, and successful zeal in the performance of all his professional work, the Board will be pleased to take into consideration the strong opinion which is entertained throughout the medical profession that even the administrative lapses which are attributed to want of judgment on Dr. Collie's part as an administrator are such as might have occurred in the best-regulated hospital in the kingdom without serious blame attaching to the superintendent." The petition closes by expressing the hope that the Board, in view of the high character, past services, and present health of Dr. Collie, will at least allow him to retire on a full and substantial pension. We have previously expressed our own belief that the call for Dr. Collie's resignation was quite unwarranted by the evidence adduced at the inquiry, and that the decision was based for the most part on what are admittedly matters of opinion. It is to be hoped that the Local Government Board will grant an old and trusted servant that provision to which his long service assuredly entitles him.

A GUILDFORD COMBINED HOSPITAL.

THE Guildford rural and urban authorities and the Godalming urban authority seem in a fair way to combine in the use of the isolation hospital erected some years ago on the confines of the town of Guildford. The action then taken by the rural authority was much in advance of its neighbours, and they deserve credit for setting a good example in the matter. The economy of proceeding by way of combination must be obvious. A single site and one administrative staff will suffice as well for three authorities as for one, and in many other respects costly multiplications will be avoided by the union of sanitary bodies. It is to be hoped that the details will be so satisfactorily settled that the towns of Guildford and Godalming will in a short time be placed on a proper footing in respect of the early isolation of first attacks of infectious diseases.

THE CAUSE OF CONGENITAL MENINGOCELE.

DR. JULIUS GROSZ, assistant medical officer of the Stephanie Hospital for Children at Buda-Pesth, publishes in the *Gyógyaszat* an instructive case of congenital meningocele. A child fourteen weeks old, weighing 3100 grammes, was admitted on account of a tumour in the occipital region, which was about the size of two large fists, of an oval shape, and with a slightly uneven surface and broad base. The tumour fluctuated p'ainly and was transparent. The skin covering it was free from hair, shiny, and provided with numerous veins. The tumour was elastic, slightly mobile, with an ill-defined but apparently bony base. The hairy scalp was shiny, tense, and only slightly covered with hair. The great fontanelle was abnormally large, the embryonic double fontanelle patent and easily found, the cranial sutures patent, especially the coronary and sagittal sutures. The circumference of the cranium was 40 cm., the long diameter 13 cm., the transverse 12 cm., and the oblique 13½ cm. On pressing the tumour the large fontanelle as well as the sutures became prominent without symptoms of brain-pressure. When the child cried the tumour showed no considerable alterations of volume. The pupils reacted slowly with eyes directed inwards and upwards. The child was being artificially fed and could swallow fairly well. The diagnosis made was congenital occipital meningocele, with slight hydrocephalus. Diarrhœa existed with varying intensity, and the infant died six weeks after admission. The tumour had during this time grown to a very perceptible extent. Dr. Preisz, who performed the post-mortem examination, found the wall of the tumour to consist of subcutaneous connective tissue, and to be lined with a thin, smooth, and fibrous coat, or, in other words, a thinned process of the dura mater. The

tumour contained clear colourless serum. The arches of the three first vertebræ were not complete, and their spinous processes were wanting. The foramen magnum was elongated posteriorly, and the occipital bone was fissured for a short distance upwards. Through this aperture the peduncle of the sac was observed to lead into the cranial cavity, and to reach the base of the fourth ventricle and the space between both softened hemispheres. The latter, especially the right one, were distended with serum. The peduncle contained also a narrow canal, which led from the much elongated posterior cornu of the right ventricle to an independent recess in the sac. The base of the fourth ventricle was, apparently in consequence of pressure, concave, and the rather small corpus geniculatum was compressed upwards and forwards; the calamus scriptorius was broken. The most remarkable alterations were observed at the base of the brain, where the whole pons Varolii, the trigeminus, abducens, and trochlear nerves were wanting. The hemispheres of the cerebellum were hardly of the size of almonds, and connected with the elongated brain and corpus geniculatum only by very thin peduncles. The brain was small, its convolutions decidedly defective, and the ventricles largely dilated. The case is evidently one of those which clearly establish the theory of the causation of meningocele. It is, according to Dr. Grosz, due to the non-union of the germinal plates. The faulty development of the brain was not consecutive, but merely an accidental anomaly of embryonic development, as was the uterus, which had only one cornu, and the kidney, which was floating.

"DISCLOSURES OF A MEDICAL MAN."

A WEEKLY lay contemporary, has published an article, four columns long, with the above heading, purporting to disclose a stupendous system of fraud in medical clubs and dispensaries, including medical associations, mutual benefit societies, and medical benefits attached to insurance offices. The article is written with considerable skill of a sort, and we are not prepared to say that it may not contain some truth. Our duty here is not to discuss the amount of truth it contains, but the method adopted for circulating statements deeply disparaging to a great profession, which may have a few unworthy members and many more poor members who are driven by poverty to do unworthy things, but which, on the whole, deserves to be treated differently. If an individual medical man does doubtful things, or very wrong things, such as are described in this article, the duty of any friendly critic is to remonstrate quietly with the offender. If a profession is deeply compromised by such members and practices, there are the medical authorities and the General Medical Council, who have jurisdiction over what cannot be otherwise described than infamous behaviour in a professional respect. To begin the accusation of the brethren by way of making a few guineas in a newspaper is, to say the least, an unhandsome proceeding, not much higher in its character than those which the writer delineates. We would even now call on this gentleman to have the courage of his accusations and lay the whole details of them before a number of gentlemen representing different classes in the profession. This is the least amend he can make to the profession for an attack which has no defence in its present shape. Whatever his response to this suggestion, we appeal to the editor of the paper which has been made the medium of his "disclosures" to give us more particulars both of the witness and of the evidence. We beg to point out to the editor of our contemporary the responsibility he has incurred. He has brought a series of charges against the profession on the strength of an anonymous witness, who, after thirty years' work in the profession, is making, as he candidly tells us "ten shillings a week, and lives in one room containing a bed, a washstand, and two chairs." These are not sure signs of discredit in a witness, but they detract greatly from the value of his evidence, and require explanation. Moreover, we should like to know whether he himself is really a qualified medical man. We infer that he is not from the conspicuous absence of a statement to this effect in his narrative of personal history. The editor seeks to mollify the dismal story by saying that it applies "only to the low class of dispensary." We are prepared to believe almost anything of this class of institutions. The public has itself very much to blame for its own mean ways of using charitable institutions, and expecting medical attendance on terms which would degrade a respectable mechanic. But even so, these "low dispensaries" have no right to be condemned on such evidence—that of an anonymous witness whose worth is represented at the end of thirty years' work by ten shillings a week. If the editor will look a little more into the article which he has allowed himself to publish, he will see that its charges do not apply only to "low dispensaries," but to men in large general practice, "to an eminent physician," to "one of our best-known physicians," &c. He will see that his responsibility in this matter is very great. The writer of the article hides himself behind the editor. But he tells us that should any doubt arise as to the truth of his statements, he is prepared to bring evidence to prove to the satisfaction of the editor the absolute truth of every instance. We respectfully challenge the editor to call for this proof, and to satisfy the medical profession, which is disparaged in the article, of his fairness by making them parties in the investigation of the facts and the examination of witnesses.

A RICHMOND ELECTION.

IN one sense it is satisfactory to see pressure being brought to bear on the municipal electors to consider health matters as foremost in the selection of members of the corporation. But one of the circulars errs, in our opinion, as to what proper sanitary administration is, for it protests against the emptying of cesspools by day. Filthy cesspools are likely to be retained in Richmond so long as their emptying is done under cover of darkness. The bringing of daylight to the exposure of filthy operations largely conduces to their being properly carried out, and also to their abandonment. Hence, elsewhere than in the metropolitan area, daylight cleansing and scavenging are gradually becoming the rule.

BORAX IN EPILEPSY.

SINCE the recommendation by Dr. Gowers, several years ago, of biborate of soda as a remedy for epilepsy, short accounts have from time to time appeared of the results obtained with the drug by different observers. As a rule, it has been found that the remedy, while not at all comparable to the bromides, is very useful in certain cases, and most useful in the class of cases in which the bromides have little or no effect, or are badly borne. The observations of Dr. Mairet, which are described in the last number of the *Progrès Médical*, go to confirm this conclusion, but several fresh points are elucidated. The observations were carried out in thirty-one cases, and were extended over many months. The patients had been variously treated previously, and the average number of attacks in the month ascertained. Then borax was given for fifteen months, and a complete tabular record is given of the attacks which took place during this time. Subsequently bromide of potassium was administered, borax being stopped, and the average number of attacks in the month under this treatment observed. The results briefly were that, of the thirty-one patients, five

received no benefit, and for that or other reasons the treatment was stopped. In four cases the drug had to be discontinued on account of the toxic effects produced; in nineteen a diminution more or less marked in the number of the attacks was obtained, and in some of those the improvement was very marked, while in three complete cessation of the attacks during several consecutive months was secured. In comparing these results with the effects obtained by bromide of potassium in the same cases it was found that in the majority of cases borax and bromide act in the same manner, reducing to a greater or less extent the number of the attacks; that in certain cases bromide acts when borax fails, while in another class borax is useful where bromide fails to effect any beneficial change. After inquiring into the nature of the cases in which each drug had its best action, the author formed the opinion that the cases in which borax has its greatest effects are those in which epilepsy is associated with gross organic disease. Thus the best result with borax was obtained in a patient with epilepsy, who also suffered from hemiplegia, with athetosis. Bromide, on the other hand, he believes to be most efficacious in cases of so-called idiopathic epilepsy.

INFLUENZA.

THE existence of sporadic cases of influenza in the metropolis and elsewhere during the past few months serves to show that the morbid agency of this remarkable and mysterious affection has not ceased to operate since the pandemic of two years ago. Hence there is no reason to doubt that further visitations of the malady in epidemic form may at any time occur, as, indeed, they seem to have recently done at widely distant parts of the globe. Thus news of such outbreaks in Russia, at Melbourne, and at Berlin has been published, whilst in this country we learn of its appearance in Cornwall and in Yorkshire. The apparent capriciousness of these recurrences in districts is not easily explained; and if contagion be the only mode of its diffusion, then the absence of a still wider extension than at present prevails remains to be explained.

THE MEDICAL PROFESSION AND PUBLIC HYPNOTIC PERFORMANCES.

WE regret to notice in one of our contemporaries the statement that "over 1000 medical gentlemen" attended the preliminary *séance* of a hypnotic entertainer in one of our public places of amusement. This fact is unfortunately advanced in the subsequent advertisments of "the greatest mesmerist on earth" as a guarantee to the public of the genuineness of his performances. There follows in the newspaper report a recital of the ordinary stage performances as witnessed for years at such humiliating spectacles, in which the subjects have, at all events in the past, been usually paid retainers, and probably have by inherent neurotic constitution, or by a process of education and frequent repetition, been rendered highly susceptible to and readily prone to pass into a state of hypnosis. We consider it right to impress upon the profession the need there is to exercise great caution, lest their presence at such entertainments be considered as giving them support. Such experiments as those made on paid subjects at public entertainments are valueless from a scientific point of view, and, as the whole question of hypnotism in its therapeutical aspect is at present *sub judice*, it would be unfortunate if anything should occur to precipitate a decision which can only be arrived at after full and carefully regulated scientific investigation. If the study of hypnotism be a legitimate field of medical investigation, let it be pursued under proper conditions, but let such performances as disgrace certain places of amusement be shunned by all who have the interests of scientific progress at heart. Apart, however, from any therapeutic value, which, from the report of many scientific observers, seems at any rate to deserve careful investigation, hypnotism affords an interesting study to the psychologist and medical jurist; and perhaps the investigation of its phenomena may throw light on many difficult psychical problems. We incline to believe that, in the interest of science and for the safety of the public, it is essential that the use of hypnotism should be restricted to the hands of responsible persons. Public exhibitions of hypnotic experiments are forbidden by law in France, Italy, Switzerland, Prussia, Portugal, and many other European countries, as being harmful to the subjects and degrading to the spectators. A Bill, approved by the Belgian Royal Academy of Medicine, was drawn up last year, in which it is provided that anyone giving a public exhibition of hypnotism will be deemed guilty of a misdemeanor punishable by fine and imprisonment, and restricts the practice to medical men so far as the hypnotisation of nervous and weak persons is concerned. It is not possible of course to regulate by law the actions of adults, and if it pleases a man or woman to be hypnotised for the sake of experiment, it is a matter in which the State cannot interfere; but legislative interference can, and ought, we think, to interpose a veto when public performances are in contemplation, or when young persons are subjected to unjustifiable experiments.

REMOVAL OF THE GASSERIAN GANGLION.

THIS important operation was performed for the third time on Thursday, Oct. 29th, at King's College Hospital, by Mr. W. Rose. The patient was a woman aged sixty-three, who had suffered from severe spasmodic tic for many years; the pain first attacked the inferior division of the fifth nerve on the right side. Two years ago about ¾ in. to 1 in. of the inferior dental and lingual nerves was removed, close to the foramen ovale. This operation was followed by relief from pain for a year; then the pain returned in the first and second divisions of the nerve, the right side of the tongue remaining anæsthetic throughout. The steps of the operation were similar to those described in THE LANCET of February 7th, 1891, p. 323. As a result of the operation, the old pain is gone. At present there is some chemosis of the conjunctiva of the right eye, but the temperature is normal and the wound has healed. We understand that a fourth case was submitted to the operation on Thursday, the 5th inst. The right side in that case, as, indeed, in all four patients, was affected, and in this, as in the third instance, a previous operation for excision of a portion of the nerves had been done three years previously, with but temporary success. The other patients (Cases 1 and 2) continue in good health and without evidence of return of pain. The profession will look forward to the Lettsomian lectures, which Mr. Rose is to give early in the coming year, for an account of his experience on this subject and for the complete details of an operation which we owe to him.

ALLEGED UNCLEANLINESS OF A SALVATION ARMY SHELTER.

IN common with others before him who have occupied themselves with schemes of expansive charity, "General" Booth, it appears, has found that in such matters the practical difficulties to be met are not small. Evidence tendered by the Mitcham Workhouse Committee leaves no doubt that, in one instance at all events, they have proved well-nigh insuperable. The condition of the Salvation Army shelter in St. John's-square, Clerkenwell, is described as being in a most unhealthy condition, and its poverty-stricken inmates as extremely filthy. The neighbouring Union of Holborn has during the last six months received from the shelter a rapidly increasing number of pauper

inmates drawn from the outcast population of other parishes, and attracted to Clerkenwell not unnaturally by the prospect of such loaves and fishes as may there be found. Some of these people come, it is said, from distant provincial parishes to swell the already overnumerous army of metropolitan paupers. One can easily understand that the Holborn guardians do not relish this addition to their parochial responsibilities. While sympathising, doubtless, as we all must, with the purpose of any, whether in the "Army" or not, who seek to raise and reform this almost hopeless and helpless concourse of human misery, they do not view with favour either the method pursued or its effects. As a first step towards improvement, the cleansing of the shelter itself has been decided on. The attention of the "General" himself will also be drawn to the evil of which it is now the fruitful source; and we may fairly expect that the leader of this religious movement, though he open his tent door to the squalid stranger, will refrain in future from sending him forth again straightway with a recommendation to his overburdened neighbours. We may further add that cleanliness in the shelter would be the more assured if the persons of its inmates were on admission subjected to some ready system of ablution. Not the utility alone, but the mere existence of this shelter, must obviously depend upon its being kept in a wholesome condition.

COMPRESSION OF THE CAUDA EQUINA.

DR. LAQUER of Frankfort has had the rare opportunity of seeing a diagnosis of compression of the cauda equina confirmed by the result of an operation, opening the spinal canal being a less common operation in Germany than it is in this country. In publishing the interesting case in the *Neurologisches Centralblatt*, the author discusses some questions of general diagnostic importance. The chief symptoms had existed for two years—that is to say, strictly localised pains in the middle of the sacrum and a painful feeling of pressure at the same spot. The rectus femoris on each side had little power, and was slightly wasted. There was temporary paresis of bladder and rectum. Tendon reflex was decreased, sexual power weakened, and there was lumbar kyphosis. Over the right trochanter there were signs of an impending bed-sore. There was no inflammation of the vertebral joints or of the bones, and there was no history of any injury. On opening the sacral canal a small cavernous lymphangioma was discovered external to the dura mater, and having no connexion either with the latter or with the root fibres, but it had pushed both cauda and dura mater very far forwards. The patient when discharged had completely recovered. The non-malignant character of the tumour, its slow growth, and consequently the only gradual development of all symptoms, enabled Dr. Laquer to make a positive diagnosis and encouraged him to operate, especially as he did not fear meningitis, the tumour being external to the dura mater. He thinks, however, that even in less favourable cases the operation is indicated as soon as a diagnosis, if only a probable one, has been made.

SANITARY PROGRESS IN JAPAN.

THE report issued by Nagayo Sensai, the Director of the Sanitary Bureau of Japan, refers to 1888 and 1889 as years in which no special epidemic occurred, and during which substantial progress was made in promoting the sanitary circumstances of the empire. On several occasions since 1877 Japan has been visited by terribly fatal epidemics of cholera, the last of these having prevailed during 1885-86, and, though certain costly measures were adopted on each occasion, these were, after all, only such as dealt with an already existing disease; they were essentially temporary in character, and did but little to prevent the recurrence of any similar epidemic. But since 1886 a different line of action has been adopted. The public have been educated to understand that improved water services and efficient sewers and drains are necessary if disease is to be prevented, and though the remedy must be a costly one, and must be continued over a long series of years, yet it has now been initiated in good earnest. In 1888 Mr. W. K. Burton, an Englishman who is professor of sanitary engineering in the Imperial University, was engaged by the Home Department to advise the Government as to the needed sanitary instructions; officials have since been provided to assist him, and the report adds that "the construction of waterworks and the improvement of drains and sewers have commenced in every part of the country." The work would seem to be largely carried out under a system of local government, for we read that when such works are in contemplation in the various districts, word is sent by the central department that if advice and counsel are needed any demand for assistance will be complied with. The report contains accounts of a number of other matters of importance, such as those relating to vaccination, the control of medicines, vital statistics, and special occurrences of disease; but the initiation of a new era of sanitary reform on intelligent lines is perhaps of the first importance. We read but little of medical control as regards the principles of public health and sanitation, but we may hope that this, which has elsewhere been proved to be an essential to success, is not being forgotten in Japan.

ELECTION OF DIRECT REPRESENTATIVES.

IN connexion with the approaching election of the direct representatives on the General Medical Council, it will be seen by reference to our advertisement columns that only those surgeons in the army, navy, and Indian services who are resident in the United Kingdom who make application by post, enclosing their postal addresses, to the registrars of the respective countries, will receive voting papers accompanied with proper instructions. Notice of the election has now been issued, giving particulars as to the nomination of candidates, the papers for which must be returned to Sir R. Quain, the returning officer, on or before the 23rd inst.

EPILEPTIC AUTOMATISM.

IN a recent number of the *Revue Médicale de la Suisse Romande* Dr. Grandjean has related a case of very great interest. It is that of a man of thirty-four, who, with the exception of an attack of somnambulism at the age of eight—an attack in which he had walked into his father's bedroom and congratulated him on being elected king of Italy—had been previously healthy. Towards the end of January, 1890, he began to suffer from nightmare and depression, without apparent cause, but he had no headache or vomiting. This condition persisted for two weeks. Then, on Feb. 9th, after going to his office and working as usual, at nine o'clock in the morning he took his hat, set out on foot, and arrived at Payerne, a village fifty kilometres distant. He had no recollection of anything that happened from the time he left his office until he awoke, in the middle of the night, in an inn at Payerne. His boots, he found, were much worn, but his clothes were in good order. He presented none of the usual effects of having passed through an epileptic paroxysm, except that he had a violent headache. After this he remained as usual for seven months, except that he had occasional "absences." Thus on one occasion, while writing, he was surprised to find that he had continued at his work for an hour without any recollection of having done so. The work was done perfectly, without a single mistake. At the end of the seven months he had another attack similar to the first, but lasting for two days, during which he had gone about to different places acting in a manner

which did not strike any observer as strange or peculiar, but being all the time unconscious. Five months later he had a similar, even more elaborate, attack, which also lasted for two days, and was followed by headache more violent than usual. Dr. Grandjean comes to the conclusion that this is undoubtedly a case of epileptic automatism. He does so from the nature of the attacks, from the fact that the man also suffered from "absences" of longer or shorter duration, really attacks of *petit mal*, and because the latter became almost totally suppressed under treatment by the bromides. The case is an important one, and it should serve to impress the fact once more that some criminals who profess complete unconsciousness of the act or acts with which they are charged may really be the subjects of epileptic automatism. If this patient had committed some crime during one of those periods of unconsciousness, a defence to the effect that he was the subject of epilepsy would have been received with considerable doubt, especially as there was nothing in the nature of a severe fit to point to in the former history, but only those temporary "absences" without any obvious convulsion.

ACT FOR AMENDING THE LAW OF MORTMAIN.

BY the operation of this statute, which became law last session, it will hereafter become impossible for the benevolent intentions of testators to be defeated through the purely technical error of their having given land instead of money for charitable purposes. The more elastic rule introduced by the statute, whilst it will still serve to prevent the accumulation of landed property in the hands of charitable corporations, will, nevertheless, secure the intended benefits by means of a wise provision that the lands devised are to be sold, and the proceeds held upon the trusts to which the lands themselves were intended to be subjected.

FLOODS AND THEIR REMEDY.

THE late autumn throughout Western and Central Europe is saddened by floods which seem, with successive years, to grow vaster and more destructive, bringing in their wake an ever-augmenting quota of destitution, misery, and disease. In those countries where this periodical scourge falls heaviest, Spain and Italy, the Governments do least to avert or mitigate it. The whole world is agreed on the source from which it springs, and nowhere has its causation and prevention been more clearly stated than in Italy herself. The lately deceased Senator Luigi Torelli, an engineer and expert in forestry of the first rank, put the matter thus: "The principal causes of the floods that visit our streams in the autumn and leave them gravel-pits for the rest of the year may be reduced to three: (1) The wholesale cutting down of trees on the hill slopes and uplands; (2) the embankment works in the upper basins of those streams; (3) the continuous silting up of the alluvial soil at their entrance into the sea. These causes have a reciprocal action on each other, and, with special characters, they admit of distinct remedies. The first, that of the reckless stripping of trees from the mountain sides, has, in Italy, been going on with increasing activity for wellnigh a century, in the last quarter of it particularly. Eighteen years ago the magnificent *bosco* of Montelli, 7000 hectares in extent, and worth millions of francs, was the pride of a whole province in the Alta Italia; now it is a bare, dreary desert, where it is vain to seek for the shadow of a tree. The splendid timber it abounded in has been sacrificed, without a thought of replanting, to railway works, naval arsenals, and other industries. Such cases are frequent throughout Italy, and the quickened evaporation, the denser, more sudden rainfall, and the unimpeded flow of the affluents, have converted her great streams into agents of widespread ruin and destruction. And here the Senator Torelli's second cause comes in. To defend the low lands from these visitations the upper basins of these rivers are fortified by immense dykes, which prevent lateral filtration and aggravate the very evil they are designed to avert. Thirdly, the mountain sides, denuded of their vegetation, yield their soil more easily to the descending streams, and this, carried down to the main channel, silts it up till, at the *débouchement* into the sea, the waters are scattered over a series of stagnant lagoons exhaling miasma in the dog days. At these deltas the efflux of the stream is barred, so that it regurgitates, and, working backwards against the current, throws the inundation ever higher up its banks. Such is the scientific history of inundations, illustrated every autumn with wearisome iteration throughout the Italian peninsula, till the Government have been goaded into recognising the evil at its source, and in framing, if not enforcing, laws to meet it. But the waste of Italy's finances on "bloated armaments," as Lord Beaconsfield called them, deprives her of all power to grapple effectively with the problem. Nineteen years ago the great hydraulic engineer, Signor Elia Lombardini, said, *à propos* of the frightful floods of that autumn: "Let Government and Parliament, after the calamities we deplore, demonstrate by deeds that true economy consists not in reducing expenses, but rather in applying them to more rational purposes for the attainment of the highest possible amelioration of the country, and its defence against foes from within as well as from without." How far this warning had effect let the terrible disasters in Piedmont, Lombardy, and Venetia of the last few weeks bear witness.

THE EARLY DIAGNOSIS OF UTERINE CARCINOMA.

IN a paper by Dr. G. Winter on the importance of an early diagnosis in uterine carcinoma, he states that on the average 25 per cent. of all women suffering from cancer of the uterus are operated on. Of this number 7 per cent. recover, while 93 per cent. succumb. Discharge is a regular symptom of carcinoma, but it is also of common occurrence amongst women in general. In carcinoma of the vaginal portion a copious watery discharge appears early in the disease, and later on assumes the colour of liquor carnis. Very important are the hæmorrhages following coition, and those in the menopause are almost pathognomonic. Pain is in the early stage of the disease entirely absent or very slight, but occurs regularly when the tumour is or becomes parametric. The indolence and indifference of women are, he considers, generally the greatest impediments to an early diagnosis of the disease.

LEICESTER AND PROVISION FOR THE TREATMENT OF TYPHOID FEVER.

A BRIEF allusion made recently in THE LANCET to the neglect of provision of hospital accommodation for the treatment of typhoid fever by the Leicester health authorities appears, judging from reports published in the local papers, to have raised the ire of some members of the committee charged with the sanitary care of that borough. We can only repeat that Leicester as a corporation stands almost alone among the important towns of the country in not hitherto having provided a hospital for this disease. At the meeting of the Town Council on the 27th ult. this subject led to an animated discussion. The need for such hospital was amply demonstrated, and the unsatisfactory accommodation which the present wooden building affords was strongly commented upon. This question is apparently somewhat to the front at the meetings &c. in connexion with the pending municipal elections, and evidently not before it was needed. The present hospital has, it appears, been very adversely re-

ported upon by Dr. Thorne Thorne, and if it consists of the same wooden structures that existed a few years ago, when one of THE LANCET Commissioners visited the town, it is no credit to a large English community. It is satisfactory to note that, as the result of the Council's deliberations, the sufferers from typhoid fever are no longer to be left unprovided for in their crowded homes, often to their own injury and the danger of others, but that a new and modern hospital is to be erected forthwith. Leicester has shown much enterprise and spent large sums of money in executing flood works and other large schemes in the interests of the health of its inhabitants; it is therefore strange that this important part of a health authority's armamentarium should have been so long unprovided.

CHOLERA AND QUARANTINE IN THE LEVANT.

NEWS comes both from Constantinople and from Marseilles to the effect that cholera is spreading widely at Damascus. According to one report, no less than 182 cases and 90 deaths have occurred in one week. The result is the imposition of sanitary cordons and quarantine restrictions, and these being, as is usually the case, easily broken, proceedings so typical of the ignorance of eastern quarantine advocates are being carried out. Unless one of these measures is intended to be of the nature of a punishment, it can only be described as cruelly childish. Thus, a convoy of 100 camels having violated the regulations laid down, the governor of Jaffa actually ordered the poor brutes to be destroyed. In the neighbourhood of the gulf of Alexandretta cholera has, happily, much diminished. In Aleppo it is declared to have disappeared; but at Alexandretta itself, and in one or two other places, isolated cases still occur.

THE VIRUS OF HYDROPHOBIA.

ANYTHING that bears on the preservation and conservation of the protective virus of hydrophobia is of interest, especially if it will in any way help to preserve the supply of a virus of fixed activity without our being compelled constantly to have recourse to inoculations into animals. In this connexion some experiments carried out by Dr. Alexander Bruschettini in the University of Bologna, and published in the *Annales de Micrographie*, are of interest. He concludes that in hydrogen, nitrogen, or *in vacuo*, the rabic virus preserves its pathogenic activity for a relatively long time, but that in carbonic acid, at ordinary room temperatures, at the end of the thirteenth day, it is not merely attenuated, but is actually destroyed. In hydrogen the rabic virus preserves its virulence, even at a temperature of 35°C., for five days, and, as is well known, such a temperature under ordinary conditions rapidly attenuates and then destroys the virus. From this Dr. Bruschettini concludes that the organism in hydrophobia, which, though probably present, has never yet been proved to be so, has an ærobic life history; in the experiments carried out by him, the organism, if present, never multiplied, but was only preserved. He is keeping several tubes of an emulsion of the spinal cord from rabie animals in hydrogen at various temperatures in order that he may determine after a considerable length of time how their virulence has been affected.

RESEARCHES UPON TUBERCULIN.

IN commenting last week upon the present position of the tuberculin question, we were obviously unable to indicate individually the many workers at home and abroad who have been occupied with scientific researches upon the nature of the substance and its alleged remedial efficacy. Amongst these, however, there is one whose name ought certainly to have been associated with that of Dr. Hunter in the line of research carried on by the latter observer. The admirable exposition of the subject by Mr. Watson Cheyne before the Royal Medical and Chirurgical Society last spring must be in the recollection of all; but his supplementary paper communicated at the Bournemouth meeting of the British Medical Association (*vide* THE LANCET, Aug. 8th and 15th) was no less important, for in it he described fully the clinical results of the employment of the products of Dr. Hunter's analytical research. Indeed, in this matter as much credit is owing to Mr. Watson Cheyne as to his colleague, and in justice to the former, as well as for the sake of historical accuracy in the record of so important a development of bacteriological inquiry, we hasten to repair the unintentional oversight in our leading article of last week. It may be recalled that in his Bournemouth paper Mr. Watson Cheyne came to the conclusion that in surgery the tuberculin treatment would probably be found less advantageous than operative procedures, but he spoke hopefully of its application to cases of internal tuberculosis, when the substance employed should be deprived of its "noxious constituents."

ARMY MEDICAL STAFF.

AMONG the items of naval and military intelligence in *The Times* of Nov. 5th is a paragraph to the effect that the Secretary for War has approved the revised regulations for admission to the Army Medical Service, and they are to be issued from the War Office immediately. We gather from this announcement that Mr. Stanhope intends to embody in the revised regulations those concessions to the department which have not been already carried out, such as, for example, the placing of medical officers in the same position in regard to sick leave as is enjoyed by officers belonging to the combatant ranks of the army.

POISONING BY BARIUM CHLORIDE.

ACUTE poisoning by the salts of barium is of rare occurrence. The following case (*Boston Medical and Surgical Journal*, July 9th, 1891), reported by MM. Ogier and Sochet, is therefore of special interest. The patient took twenty grammes of the salt in mistake for magnesium sulphate. Violent vomiting ensued almost immediately, followed by diarrhœa. The vomited matters were at first green in colour, but later were deeply tinged with blood. Death occurred in five hours. At the necropsy the following conditions were found:—There was slight congestion of the lungs. The mucous membrane of the stomach was very much swollen, and red in places. The kidneys were congested. The cavities of the heart contained a small amount of blood, partly coagulated, partly fluid, somewhat viscid and dark in colour. The intestines contained a small quantity of fluid; the mucous membrane was normal. The brain and meninges did not present the congested character which has been noticed in other cases of poisoning by the salts of barium. The authors of the paper made a separate determination with the various organs of the unchanged barium chloride and that which had been changed to sulphate by the action of the sulphates in the system. No barium chloride was found in the contents of the stomach or intestine, but traces were discovered in the liver, kidneys, lungs, blood, and spleen. The distribution of the barium sulphate was as follows: Minute traces in the stomach and intestines; more marked quantities in the liver, kidneys, spleen, lungs, and heart. A great disproportion existed between the quantity taken and the amount isolated from the organs. While twenty grammes were taken, less than one half-gramme was recovered. The explanation is to be found in the prompt removal of the poison by vomiting. The salts of barium apparently resemble in this respect the salts of certain other metals—

copper for example. The recovery, therefore, of a small quantity from the organs does not justify the conclusion that the quantity was small and incapable of causing death. The authors of the paper, as a result of numerous investigations, reject the hypothesis which has been suggested, that the salts of barium determine death as a result of their conversion into sulphate, thus forming a mechanical obstacle to the circulation.

THE CHOLERA RECORD IN INDIA IN 1889.

OUR readers may glean some interesting facts connected with the medical history of the general population of India from the Report on the Sanitary Measures in India in 1889-90. As regards the prevalence of cholera, for example, the total number of deaths from that disease registered throughout India was very considerably greater in 1889 than in the preceding year. The European army, however, did not, as a whole, suffer from cholera to any extent; in fact, the number of attacks and deaths fell to about one-half what they were in 1888. All provinces, except the Punjab, Bombay, Hyderabad, and Lower Burmah, contributed to the increased total mortality; but the increase was especially pronounced in Bengal, Assam, North-Western Provinces, and Oudh. The seasonal prevalence of the disease in the several provinces is set forth in a table. It appears that, speaking generally, the number of deaths rose rapidly in March and continued to increase up to June. Thereafter it fell gradually to November, but increased again in December. February was the month of minimum mortality. Cholera was very prevalent in Assam in 1889, and gave rise to nearly twice as many deaths as in 1888. The Central Provinces suffered very severely after a year of comparative immunity. The Sanitary Commissioner remarks, in regard to the origin of the disease being attributed to importation by human intercourse, that no satisfactory explanation is given of its almost simultaneous appearance in many centres of a district, nor of the strange exemption of certain areas environed by cholera. It is stated that out of a total of 1434 attendants on cholera cases thirty-six were attacked with the disease, giving a percentage of 2·51. The report contains an excellent contribution, by Brigade Surgeon R. Bowman of the Bombay Medical Service, on an outbreak of cholera in the Wilaiats of Bussorah and Baghdad, the chief interest of which consists in the fact that until 1889 there had been no epidemic of cholera there since November, 1861.

FOREIGN UNIVERSITY INTELLIGENCE.

Buda Pesth.—Dr. Billfalvi has been appointed Assistant Professor of Physiology.

Freiburg.—Dr. Oppel, Prosector in the Anatomical Institute, has been recognised as *privat-docent*.

Kazan.—Dr. Mislavsky has been appointed to the chair of Physiology.

Kieff.—Dr. Morotsoff has been appointed Professor of Operative Surgery.

Lemberg.—Arrangements are being made for adding a Medical Faculty to this University, which is at present without one.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.

THE deaths of the following distinguished members of the medical profession abroad have been announced:—Dr. Reichardt, Professor of Chemistry in the University of Jena; Dr. E. F. von Marxoff, Extraordinary Professor of Physiology in Vienna, well known by his researches on digestion and on the circulation of the blood, and by a hæmometer which he devised; Dr. Naïm Bey, Professor in the Constantinople Medical Faculty. Dr. Heinrich K. H. Hoffmann, Professor of Botany in the University of Giessen; Professor José Seco Baldor of Madrid.

MR. W. ANDERSON has been elected surgeon to St. Thomas's Hospital in succession to Mr. Croft, recently appointed consulting surgeon.

THE Morton Lecture on Cancer and Cancerous Diseases will be given by Mr. Oliver Pemberton, F.R.C.S., at the Royal College of Surgeons, on Feb. 10th, 1892.

THE General Medical Council is summoned to meet on Tuesday, Nov. 24th.

THE WORK OF THE PAST COLLEGIATE YEAR AT THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

A SUMMARY of the work of the past collegiate year (1890-91) at the Royal College of Surgeons may conveniently be arranged under the headings of the Secretary's report.

Extension of the College Premises.—The smaller of the two new museums has been completed, but the completion of the larger museum has been delayed by the strike of the carpenters and joiners. The expenditure of £2136 was sanctioned by the Council for fittings &c. The forecourt of the College has been altered, enlarged, supplied with additional railings, and repaved. The estimates of Messrs. Higgs and Hill for the execution of the work, amounting to £1894, were sanctioned by the Council. The entrance-hall to the western museum was enlarged for greater convenience of access.

Laboratories on the Embankment.—The laboratories have been completed, equipped, and brought into working order. The whole of the grant of £2000 from the Colleges has been expended on apparatus, instruments, and various other fittings and furniture, and the Laboratories Committee applied for and obtained an additional grant of £500 for the same purpose. The original estimate for furnishing the laboratories amounted to £5000, and therefore the Laboratories Committee have done well in fitting up the laboratories, library, and theatre for half the amount. At the date of their last report, twenty-one gentlemen were pursuing investigations in the laboratories.

Committee of Management.—Regulations have been adopted for ensuring that students of universities of the United Kingdom shall fulfil the complete curriculum of study before gaining admission to the final examination of the Examining Board in England. At the instance of the deans of the several medical schools the committee recommended and the Colleges approved the adoption of resolutions requiring—(1) every candidate who fails to pass the examination in Elementary Anatomy or Elementary Physiology to produce, before admission to re-examination, a certificate of having received instruction in the subject or subjects in which he has been referred during a period of not less than three months subsequently to the date of his reference; and (2) the insertion of the words "to the satisfaction of the lecturer or teacher" into all certificates of attendance in the schedules for the several examinations of the Conjoint Board. In accordance with the request of the Royal College of Physicians, the Committee of Management formulated rules for determining the conditions under which institutions should be recognised as giving adequate instruction for the purposes of the Public Health diploma, and availed themselves of the assistance of the examiners in Public Health in preparing a "Synopsis of the Course of Laboratory Instruction" to be attended by candidates for the diploma in Public Health. The proceedings of the Committee in regard to the five years' curriculum were summarised in THE LANCET of last week.

The General Medical Council.—The vacancy occasioned by the death of Mr. John Marshall was filled by the election for five years of Mr. Thomas Bryant as representative of the College in the General Council of Medical Education and Registration.

Reconstitution of the University of London.—The rejection

by Convocation of the University of London of the scheme for the reconstitution of the University issued by the Senate has deprived the proceedings of the delegates of the College of any interest which they possessed. It will, therefore, suffice to remark that the revised scheme of the Senate of the University was forwarded to the College on Feb. 6th, 1891, and approved by the Council on Feb 12th; and that on March 12th we find the Council adopting resolutions for placing before a meeting of Fellows and Members of the College, to be summoned for the purpose, the proceedings of the Council relating to the scheme, for sending copies of the scheme to every Fellow and Member who applied for them, and for allowing Fellows and Members to submit to the meeting such resolutions as should be sanctioned by the President as being in order. By the adoption of these resolutions on March 12th the Council took the wind out of the sails of the Association of Fellows, for on March 14th the secretary of the Association, Mr. Percy H. Dunn, forwarded a requisition, signed by thirty-three Fellows and Members of the College, requesting the Council to sanction and convene a general meeting of Fellows and Members, to be held at the College as early as possible, to consider and discuss the proposed relations of the College to the University of London, as set forth in the revised scheme of the Senate of the University. This requisition was read to the Council on April 9th, when Mr. Dunn was informed that "the meeting which the Council on the 12th ultimo determined to summon would be held on Monday, May 11th, at 3 o'clock P.M." The three resolutions passed at this general meeting were duly recorded and discussed at the time in the pages of THE LANCET, and it only remains to add that this chapter of medical history was closed by a letter dated June 4th, 1891, to the Council of the College from Mr. Arthur Milman, registrar of the University of London, stating that "the Senate, although unable to proceed with the scheme for the reconstitution of the University in consequence of its rejection by Convocation, have by no means abandoned the idea of making such an arrangement as will maintain the essential principles which have been agreed to, and that they believe that under the provisions of the existing Charter of the University and of the Medical Acts that closer relation between the University and the Royal Colleges and medical schools which has been so earnestly desired on all sides may be brought about." What this idea portends time alone can divulge, but it has aroused the fears of some of the Fellows of the College that some fresh scheme may be adopted before the corporate body has had any opportunity of considering it.

New University for London.—The immediate effect of the rejection by Convocation of the scheme for the reconstitution of the University of London was that the Lords of the Privy Council announced their intention to take into consideration the petition of King's College and University College, praying for the grant of a Charter for a Teaching University for London and to hear counsel on the matter, and requested the Royal Colleges, if they desired to be heard by their lordships, to lodge twenty-five copies of a joint case at the Privy Council Office on or before June 22nd, 1891. At the instance of the delegates of the College on the "University for London Question," the Council joined with the Royal College of Physicians in asking the Privy Council for an extension of time, and empowered their delegates to meet the delegates of the College of Physicians for the consideration of the proposed Charter, and to consult with representatives of King's and University Colleges. The ultimate issue of the conferences which ensued between these bodies and delegates from the medical schools was that the two Royal Colleges expressed themselves willing to assist in the formation of a new University in London on the understanding that the two Royal Colleges should of themselves form the Assembly of the Faculty of Medicine of the University, and when the Privy Council rejected the proposal they retired altogether from further participation in the scheme, leaving to each of the several London medical schools a separate representation on the Council of the new University. A statement of the proceedings of the College in reference to the Charter of the new University was laid before a meeting of Fellows and Members hurriedly summoned for July 31st, and at that meeting, which was very scantily attended, a resolution was passed opposed to the representation of the College on the Council of the new University.

Annual Meeting of Fellows and Members: Deputation of Fellows.—These topics have been fully dealt with in the pages of THE LANCET.

Hunterian Oration.—The best thanks of the Council were given to Mr. Hutchinson for his Oration on Feb. 14th, 1891, and he was requested to publish the same.

Miscellaneous Topics.—Resolutions expressive of sorrow and condolence were passed by the Council when the deaths of Mr. John Marshall and Sir Prescott Hewett were reported. Mr. Alexander Paterson of Sydney, N.S.W., was removed from being a Member of the College on account of his persistence in issuing unprofessional advertisements; and at the quarterly meeting of the Council in July Mr. Rivington and Mr. Jessop were admitted members of the Council. Mr. Thomas Bryant was re-elected president, and Mr. Hulke and Mr. Berkeley Hill were elected vice-presidents for the ensuing year. It is satisfactory to note the liberality of the Council in placing the buildings of the corporation at the disposal of scientific bodies. Thus the Laboratories Committee invited the Physiological Society to hold its meeting in the laboratories in November, 1890, and the rooms in the Examination Hall were placed at the disposal of the British Dental Association and the International Congress of Hygiene and Demography for their meetings in August last.

Library.—The hours of opening the library from January, 1891, were fixed by the Council from 11 A.M. to 7 P.M. on each week-day except Saturday for ten months in the year, and on Saturday from 11 A.M. to 1 P.M. as heretofore. In August the library is closed at 6 P.M., and during September is shut. During the past year the library was open on 277 days, and the number of readers was 9899. To secure quiet a carpet has been laid down and swing glass doors have been hung between the reading room and the librarian's room. The new catalogue is rapidly progressing, and as far as finished is available for readers. Under the fostering care of the Council and the Library Committee, and through the zeal of the librarian, Mr. Bailey, constant additions of books, pamphlets, and journals by donation, purchase, and exchange are made to the collection, and the library is in every way an honour to the College.

Museum.—As a special report on the museum appears yearly in the pages of THE LANCET, it will suffice here to state that there were 9439 visitors in the year 1890-91.

Fellows and Members; Examinations; Boards of Examiners; Finances, Income, and Expenditure of the College.—Full information will be found in THE LANCET of Oct. 24th, in the special article, "Calendar of the Royal College of Surgeons of England," p. 953.

The Report of the Council of the College brings into prominence the following facts:—

"*Income.*—The total income of the College for the past year shows an increase on that of the previous year of £750, and exceeds the amount estimated by the Finance Committee as the probable income by £200. The examination fees form the largest source of income, and it is owing to a fluctuation in these that the difference in income is due. In the year 1889 to 1890, in consequence of an alteration in the regulations for the second examination, there was a temporary decrease in the amount of fees from that examination; but in the present year, now that the new regulation has come into working order, the total fees have once more reached the average, £19,000. Among the incidental receipts there is an increase of over £200 in the amount received from hire of rooms at the Examination Hall. As regards the rents from house property, there is a decrease of £371, and owing to the extension of the College premises there are now only two houses from which income is derived, both being let on lease at £350 a year. The receipts from dividends on stocks and shares, notwithstanding the sale of stock during the year, show an increase of £60 in consequence of the additional dividends received from the stocks transferred to the College on the death of Mr. Morris Wilson.

"*Expenditure.*—The total ordinary expenditure for the past year shows an increase of £300 on that of the previous year, and is about £800 less than the amount of the estimated expenditure, chiefly in consequence of a smaller sum than expected having been spent on fittings and instruments for the laboratories. The fees paid to examiners form this year a larger item of expenditure in proportion to the increase in the examination fees received. The expenses of the Examination Hall have increased £270, and the laboratories, which are now in full working order, have this year cost the College £1400. The largest item of expense under this head is for furniture and fittings, but now that

the laboratories have been fairly started, expenditure in this respect should be greatly reduced. The general working expenses of the collegiate department are less by £1400 than the expenditure under the same head for the previous year, the difference being due to the reduced expenditure on repairs and painting, and to no large premium on insurance having been paid as in the previous year. There is a slight decrease in the expenditure of the museum, and the library expenditure remains about the same as in the previous year.

"The extraordinary expenditure amounts to £9400 on the extension of the College premises, and to £2000 on the extension of the Examination Hall buildings, and to meet this it has been necessary to sell out £9000 stock." It is estimated that the extraordinary expenditure on buildings will amount this year to about £10,000, and to meet this it may be necessary to sell out about £9000 stock.

Obituary.—The list of Fellows and Members contained in the report of the Council whose deaths have been reported as having taken place during the year includes the names of 43 Fellows and 296 Members of the College.

HOSPITAL ACCOUNTS.

THE volume of evidence published by the Committee of the House of Lords contains, among other exhibits, two forms of account suggested for adoption by hospitals and medical charities in the presentation of their annual statements to the general public, or, as the case may be, to a government department, or to a public body like the committee of the Hospital Sunday Fund. One of these schedules originated in the office of THE LANCET, having been suggested by the difficulties which have been found in reducing the various accounts as at present published to a common form for the purpose of exhibiting the aggregate result in connexion with our Hospital Sunday Supplement. The other is the work of a Committee of Hospital Secretaries, convened by the authorities of the Hospital Sunday Fund to consider the best way of exhibiting the details of income and expenditure for the purposes of the annual distribution of the proceeds of the Hospital Sunday collection. The two forms of statement have thus been drawn up under very different conditions, although with very similar ends in view, and it is interesting to observe what they have in common and wherein they differ.

In the first place it is noteworthy that the want of uniformity has been very keenly felt. Both attempts are attempts to supply this want; and, indeed, it will hardly be doubted by anybody who gives attention to the matter that uniformity in the presentation of accounts is a matter of the very greatest moment. There is no other way of bringing the record of an institution into comparison with that of another than by reducing the accounts to a common schedule; and without close comparison there can be no effective criticism on the one hand, and no fruitful giving and receiving of hints upon the other hand. As matters stand, the diversity which obtains is such as to preclude anything approaching to strict comparison; it even renders the compilation of aggregates a matter of the very greatest uncertainty. For example, it was pointed out to the committee that one hospital will exhibit all its receipts from legacies within a year as items of income in that year—a very natural and intelligible course. Another will bring part of its income from legacies to account in this way, and keep the remainder wholly out of the income account. A third will enter legacies on both sides of the account: that is to say, first as income (a view which everybody will understand—and then as expenditure upon some principle which it is not easy to appreciate, but which may perhaps not unfairly be described as an accountancy fiction. A fourth, again, will leave legacies entirely out of its statement, and record them only by a paragraph in its report. Now, on any principle which justifies the publication of hospital accounts at all, it is clear that three of these four methods must be wrong. If the public is to receive and consider any statement at all, it must be a statement of facts, and whatever reasons the various accountants who prepare these several statements may have for their very divergent methods of doing so, there cannot be a question that where one succeeds in giving the public a clear view of the material facts, the other three fail. It is therefore in no degree surprising that something like unanimity should exist as to the importance of putting an end to such perplexities, and calling upon all who undertake the administration of the public charity to render account of their trust in such a manner as to throw no needless obstacles in the way of those who try to understand them.

But although the existence of one and the same problem is clearly recognised, the proposals for its solution exhibit a marked diversity. The principles upon which the one schedule has been framed may be clearly and briefly stated. It has been taken for granted that what the public desire to know about a medical charity when it comes to claim their support are, broadly, the following points. First, the extent of its pecuniary resources and of the necessities to which it ministers; and, in the second place, the sources from which its income is derived and the direction in which its expenditure flows. Accordingly the various items brought to account are distributed in such a manner as to exhibit in separate divisions the total income from voluntary contributions and from realised property, also the sum which may be taken to represent the well-assured and annual income of the Society, and, again, that which represents windfalls—casual and probably large sums that cannot be counted upon as sources of income in successive years. In like manner the expenditure is divided into departments which exhibit at a glance how much subserves directly the charitable objects of the institution, how much is expended upon the official staff, and how much is laid out in buildings, permanent improvements, or investments. From such a statement several important conclusions can at once be drawn. For example, a mere glance shows whether the society has improved its financial position or gone back, an easily made examination suffices to ascertain whether the expenditure upon professional and domestic services or the machinery of collection or other collateral matters is excessive, and a little care suffices to carry the examination into every department of the work. This is the form which we have already approved, and it is unnecessary, therefore, and perhaps not desirable, that we should attempt to adjudicate upon it again. It has the merit of serving to bring the foregoing points into prominence, and this appears to us to be the chief merit to which a schedule of the kind can possibly lay claim; but whether that be a sound view or not, that is the general scheme of this proposed schedule. To the other we must revert in a future impression, as its discussion on a corresponding scale would make too large a demand upon our space at the present time.

FLUORINE.

FURTHER results of M. Moissan's remarkable researches on fluorine are to hand, and he has contributed a long but intensely interesting paper to the October number of the *Annales de Chimie et de Physique*. In a paper published in 1887 M. Moissan showed that pure hydrofluoric acid readily dissolved the double fluoride of potassium and hydrogen, and that the liquid thus obtained was a good conductor of electricity, and therefore permitted the passage of a current for the purposes of electrolysis. By passing a strong current through the liquid contained in a platinum apparatus, and specially fitted with stoppers of fluor spar and platinum and immersed in a bath of methyl chloride (temperature 50° C.), free gaseous fluorine was obtained and isolated for the first time. M. Moissan has now constructed an improved form of apparatus for the production of this gas in any desired quantity, and at almost any time. The decomposition taking place was represented in two stages. At first it was thought that the fluoride of potassium was simply split up into potassium and fluorine, and then the potassium, acting on the hydrofluoric acid, gave potassium fluoride and free hydrogen. It is probable, however, that the action is not so simple, inasmuch as M. Moissan now finds that fluorine

obtained in a nascent condition attacks platinum, and produces platinum tetra-fluoride Pt F_4; and this probably unites with potassium fluoride to form a double salt analogous to the well-known platinic chloride 2 K Cl, Pt Cl. It is only when the liquid contains this double salt that the electrolysis proceeds in a regular manner, yielding gaseous fluorine at the positive pole, and hydrogen and a complex compound containing potassium, platinum, and fluorine, at the negative pole. Fluorine possesses an odour which M. Moissan compares to a mixture of hypochlorous acid and nitrogen peroxide; but this odour is usually masked by that of ozone, which is always produced in moist air. Fluorine produces serious irritation of the bronchial tubes and mucous membranes of the nasal cavities, the effects of which are felt for quite a fortnight. At a temperature of 95°, and under ordinary atmospheric pressure, fluorine remains gaseous. Probably no element exhibits a more intense chemical activity than fluorine. It combines with hydrogen even at 23°, and in the dark with explosive force, this being the first instance of two gases uniting directly without the intervention of extraneous energy. Whilst not apparently acting on oxygen even up to a temperature of 500°, it appears to exert some action on ozone. When a few drops of water are placed in a suitable apparatus, and fluorine is allowed to enter, the water is instantly decomposed, and a thick dark cloud is seen to appear where each drop of water had previously existed. This cloud soon diminishes in intensity, and is replaced by a beautiful blue gas, which is, in fact, ozone in a state of considerable density. Nitrogen and chlorine do not appear to react with fluorine. Sulphur rapidly melts and inflames. Bromine and iodine combine with fluorine with the production of flame. When phosphorus comes in contact with it, a most lively action ensues, accompanied by vivid incandescence. Arsenic combines in a similar manner. Although chlorine does not unite with carbon, even at the temperature of the electric arc, fluorine reacts at ordinary temperatures with finely divided carbon. Boron inflames instantly, and gives brilliant sparks; while the action between fluorine and silicon is described as one of the most beautiful of all these extraordinary manifestations of chemical activity. Cold crystals of silicon become white hot, and burn with a hot flame, scattering showers of star-like white hot particles in all directions. The residue is found to be fused, which, as crystalline silicon only melts at a temperature superior to 1200° C., indicates a very intense heat. Potassium, sodium, calcium, thallium, magnesium, iron, aluminium, chromium, manganese, antimony, lead, mercury, copper, silver, gold, and platinum, are all acted upon by fluorine, and in many cases the action is accompanied by vivid luminosity. Non-metallic compounds, like sulphuretted hydrogen, sulphur dioxide, hydrogen chloride, hydrogen bromide, hydrogen iodide, hydrogen nitrate, ammonia gas, phosphoric acid (burns with pale flame), arsenious oxide, carbon disulphide, and boric acid (incandesces vividly), are readily decomposed by fluorine. Silicon dioxide (pure quartz or flint), one of the most inert of substances at ordinary temperatures, takes fire *in the cold* in contact with fluorine. Carbon tetrachloride, however, reacts slowly, but a mixture of the vapours inflames spontaneously. Fluorine acts on metallic compounds, such as the chlorides, bromides, iodides, cyanides, and sulphides, and on potash and lime, with more or less intense energy. Sulphates, nitrates, and phosphates require the application of varying degrees of heat, when they, too, succumb to rapid and energetic decomposition. The action on a few organic compounds has been studied. Chloroform, with an excess of fluorine explodes, and the tube is shattered in pieces. With a limited quantity carbon is deposited and fluorides of carbon and hydrogen are evolved, together with chlorine. Methyl chloride behaves similarly. Alcohol takes fire with explosive violence without deposition of carbon, while aldehyde is formed to a considerable extent. Acetic acid, benzene, and aniline are also decomposed, the first two with violence, and the last accompanied by flame. Such are very briefly the results of the more recent researches of M. Moissan, and, as Professor A. E. Tutton puts it in a concluding paragraph of an article in last week's *Nature* (to which for a fuller account we would refer our readers), "they cannot fail to impress those who read them with the prodigious nature of the forces associated with those minutest of entities, the chemical atoms, as exhibited at their maximum, in so far as our knowledge at present goes in the case of the element fluorine."

THE BREWERS' EXHIBITION.

THE Brewers' Exhibition may be said to have "a short existence and a merry one." Its doors are opened for only a week, and, seeing that the bulk of the exhibits are of very general interest, one is led to wonder why the authorities do not permit it to have a longer "run." The brewing and mineral water trades are of course mainly represented, but these bring in their train a host of auxiliary subjects which may prove of interest to many of the readers of THE LANCET. Such are, for example, the preservation of beer and wines, antiseptic treatment, filtration, new brewing materials, new non-alcoholic beverages, improvements in the bottling of non-alcoholic beverages, and certain sanitary processes connected with the manufacture of both mineral waters and fermented liquors. The display of mineral water machinery is as a rule watched with the keenest interest. In the excellent show of Messrs. Barnett and Foster, for example, the marvellous machine for filling patent bottles attracted considerable attention. The bottles to be filled are fed by means of a trough on one side, syruped, filled, and delivered into a return trough back to the operator, ready for putting into boxes at the almost incredible rate of from 130 to 150 dozen per hour. The same firm exhibited a device by means of which the ordinary glass marble-stoppered bottle can be more easily and conveniently opened. The opener is attached to the bottle, and simply consists of a small hoop of wire which acts as a lever to raise the indiarubber ring and so release the pressure. It is only necessary to press the opener well over with the thumb, when the glass ball falls and the wire retains its former position. Some interesting and important improvements in syphons were shown on this stand. One noteworthy improvement consists in providing the glass tube with a check rubber valve, so that the outflow does not come out with a rush, but in a steady stream, retaining the gas, and securing a draught of soda from a syphon equal in sharpness to that taken from a highly charged soda bottle. However suddenly the lever may be pressed, the liquid cannot rush out with a rude splash, as is frequently the case with the ordinary syphons. Messrs. Bratby and Hincliffe showed a machine specially constructed for securing thorough impregnation of water with carbonic acid gas. This machine displays much ingenuity, and is so made that the water to be charged is forced through a number of tiny holes (which would hardly permit of the passage of a pin's point) into a copper cylinder containing gas under very high pressure; the water is then forced into a similar cylinder at 80 lb. pressure, and ultimately driven to the "power turnover filling machine" of the same firm. Messrs. Dan Rylands exhibited several aerated water plants of sizes to produce from 600 to 3000 dozens per day. Their patent glass-lined tubing for mineral water manufacture and for water mains and service pipes is not without interest. It is said to be an absolute preventive of lead or other metallic contamination. This firm also showed a simple compressed sponge filter, which is recommended for the removal of suspended matter in liquids. The vertical refrigerator of Messrs. Robert Morton and Co., for the cooling of brewers' and distillers' worts and other fluids, is worthy of notice. The refrigerator is made of a series of hand-drawn copper tubes, through which a steady stream of water is constantly passing. The fluid to be cooled is allowed to trickle down the immense surface of tubing, reminding one of the system used for heating the water in locomotive boilers. Refrigerators are made, it is stated, to cool one hundred barrels per hour at a minimum cost. There was a goodly array of non-alcoholic drinks. Amongst those noticed were the excellent productions of the Pure Water Company, including recent additions in the form of Kola champagne and Kola liqueur; Kops' ale, said to be brewed from the best Kentish hops and absolutely non-alcoholic; Cox and Company's "Antiburton" and hop bitter ale, the latter being a first-rate imitation of ordinary brewed liquor; and the Twin Bottle and Bottling Company's beverages. The latter call for brief description. Two bottles are lashed together, one being moulded to the shape of the other. In one bottle is, say, soda-water, and in the other perhaps tea or coffee infusion or claret. The two liquids mingle, of course, when poured into a glass, and a more or less agreeable drink is obtained. The following filters were exhibited: The Berkefeld Kiesel-

guhr Filter, already fully described in THE LANCET; the Idiocathartes Removable Plate Water Filter; Barstow's Combination Natural Stone and Carbon Filter, in which a natural stone lining is the main novelty; the Rapide of Messrs. Maignen and Co., and the filter of H. Rawlings, in which twice burned and specially prepared animal charcoal is used—a point of some interest and importance, as it is stated that ordinary animal charcoal is seldom free from unburnt organic matter, and this has not improbably brought it hitherto into disfavour. "Cum Grano Salis" is the name given to a hardening powder for the treatment of water destined for brewing purposes, and deficient in saline constituents. It is well known that the hardness of Burton water contributes in no small degree to the esteemed character of the beer there produced. The Bucket Fire Extinguisher, though it cannot claim to have any direct bearing on the character of the exhibition, is not out of place in any large building. Like many inventions, it is extremely simple, and consists of a covered receptacle containing a considerable quantity of water, in which is submerged one or more nests of telescopically stored fire buckets, which can be instantly withdrawn full of water and ready for immediate use. By this unique system of telescoping the buckets beneath water ten, twenty, thirty, or more can be stored in a surprisingly small space. Amongst odd and useful inventions was the patent broaching tap of Messrs. Gabb, Bibra, and Co., which may be likened to a key fitting in a lock provided on the barrel, so obviating the waste of the contents, which unavoidably happens when the clumsy hammering in of an ordinary tap is adopted. The treatment of beer, wine, and other liquors with antiseptics finds ample illustration in the exhibition of remarkably fine chemical products of Messrs. Boake and Co. Their chief product, and one made by a recently discovered process, is a new antiseptic called by them K.M.S. (kalium meta-sulphite). It is an anhydrous, beautifully crystalline salt, containing 57 per cent. of SO_2, and has the formula $K_2SO_3.SO_2$. The additional molecule of SO_2 is easily expelled, even, it is stated, by the feeblest acids. It is intended largely for the preservation of wine and beer. Some idea of its preserving influence can be gained from the fact that beer brewed in Australia last year, and kept for eighteen months, was submitted for tasting at the Exhibition and found to be in perfect potable condition. The employment of this salt in the small quantity that is required would not appear to be harmful. It certainly seems less objectionable than salicylic acid, while it is a preparation of greater elegance and stability than bisulphite of lime. "Semper dulcis" is the preparation of J. Boulton and Co., which we note is advocated as a useful preservative for milk, butter, fish, soups, vegetables, and jams. Mention may also be made, while speaking of antiseptics, of the carbon enamel of Messrs. Crawford and Co., which is intended for the cleansing of musty and foul casks; the bottle-washing machines of Messrs. Clarke Bros.; the upright system of soaking and cleansing bottles of Mr. T. Hill; and the ingenious cask-washing and seasoning machines of Messrs. Thompson and Co. Lastly, of the apparatus exhibited for ventilating, drying, and removing heated or foul air so often met with in breweries and mineral water factories, were the Wing's disc fan of Messrs. Potter and Co. and the Blackman air propeller.

THE ELECTION OF DIRECT REPRESENTATIVES.

A NUMEROUSLY attended meeting of general practitioners, convened by the General Practitioners' Alliance, was held at 29, Threadneedle-street, E.C., on the 28th ult.

Dr. J. W. J. Oswald, having been voted to the chair, said that no doubt everyone there had received a copy of an address from the present direct representatives on the General Medical Council seeking re-election. While it must be admitted that these three gentlemen had done some good work, it could not be contended that men in the position of Sir B. W. Foster and Mr. Wheelhouse could really understand the wants of general practitioners, or advocate their cause with such feelings of sympathy as those actually engaged in general practice. For that reason he was glad to know that Dr. Alderson and Mr. Brown were willing to come forward to fight their battle, and he sincerely hoped that they would be well supported by the profession.

The candidates then briefly addressed the meeting, stating their policy if elected.

Dr. Hugh Woods said that, after hearing the addresses of Dr. Alderson and Mr. Brown, he thought there could be no question as to the feeling of the meeting in regard to their candidature. He felt sure that everyone present would give them hearty support, and do all they could to secure their return. It was time that general practitioners made use of the power they possessed, and returned as their representatives men from their own ranks. He would propose: "That this meeting resolves itself into a committee (with power to add to its number) to promote the election of Dr. Alderson and Mr. George Brown as direct representatives on the General Medical Council."

Mr. Corbyn said he had great pleasure in seconding Dr. Woods' proposition. This was essentially a time when general practitioners should come forward in the most united and determined manner to defend their own interests. It was no use looking to outsiders to help them. If they wished to gain their point and make their influence felt in the Medical Parliament, they should not miss the present opportunity.

The resolution was carried unanimously.

Dr. J. W. J. Oswald was appointed chairman, Mr. James Savage and Dr. Hugh Woods vice-chairmen, and Mr. Campbell Boyd secretary of the Election Committee.

The names of forty gentlemen having been handed in as willing to act on the committee, the meeting concluded with a vote of thanks to the chairman.

THE COMMUNICABILITY OF YELLOW FEVER.

AN interesting paper on the Communicability of Yellow Fever has been published in the "British Guiana Medical Annual" by Mr. J. S. Wallbridge, M.R.C.S., medical inspector of that colony.

Mr. Wallbridge contends that the disease is not endemic there, except so long as we keep up a supply of cases by the fresh importation of the germ, and so long as we provide the favourite habitats in which the germ delights to dwell. Under such circumstances the production of suitable soil in the person of a susceptible new-comer is like the application of fire to a match. The flame bursts forth with fatal force. For some years past strenuous efforts have been made to prevent the importation of the disease into Georgetown, and not only to do this, but also to stamp out the existing germs of the disease left as a legacy to us by pre existing cases. Where such efforts have proved unsuccessful they have been repeated with renewed and increased energy. What has been the result? In 1881, as the result of fresh importation, the disease raged with epidemic virulence. Since 1881 outbreaks of the disease have occurred from local centres left by the epidemic of 1881, and no year was free from the disease until 1889. Georgetown has been entirely free from the disease during the years 1889, 1890, and 1891, up to the present time. The three most favourable habitats of the yellow fever germ are the bilges of wooden ships, the tidal mud of a tropical river, and the cesspits sunk in the alluvial soil of a tropical town. As regards the bilges of wooden ships, his experience led Mr. Wallbridge to the conclusion that those cargoes which most effectually aid in maintaining the potential character of the bilges as a home of the yellow fever germ are coal, timber, and sugar. He has known many instances of the virulent intensity with which the disease will manifest itself on board a coal ship. As showing the rapidity with which the disease may be contracted by a susceptible subject he mentions two cases. One case was that of a sailor in the *Essequibo*, concerning whom the late Dr. Freeman stated, in his report on the outbreak of 1882, that a visit of only a few minutes to an infected ship was sufficient for the contraction of the disease, with fatal effects. The other case was that of an overseer who paid a short visit to the room of an infected friend in Georgetown, and that visit, which is

known to have been the only exposure to the disease to which that overseer was subjected, was speedily followed by symptoms of the disease in fatal form. Mr. Wallbridge's experience leads him to believe that the ship most likely from its construction to convey infection is a wooden ship of the kind technically termed "tight"—i.e., a ship whose bilges allow of very little flow through them, that which finds a lodging in such bilges not being readily removed. On the other hand, in direct contradistinction to such a ship as this, is the leaky ship, which appears to possess an immunity from the disease in proportion to its leakiness. He believes also that there is no limit to the period during which the yellow fever germ may remain dormant in the bilges of a wooden ship or in the depths of the closet cesspit of a tropical town, ready to pounce upon its prey when a favourable opportunity offers itself. Efforts to prevent the importation of yellow fever should, he thinks, take the form, not of an obsolete system of quarantine, consisting chiefly of mere detention, but of a reasonable detention, combined with systematic medical inspection, searching inquiry, proper isolation of the sick and the healthy separately, disinfection carefully directed towards the usual channels of the infection, and, when necessary, the destruction of infected articles. Suspected vessels—i.e., vessels with a previous history of yellow fever, or coming from an infected locality, but without having any cases on board—should be dealt with by the proper authorities, as well as vessels actually infected. Should all efforts to keep out the unwelcome intruder be attended with failure, then disinfection should be commenced at once carefully and thoroughly, until all possible risk of infection has ceased to exist. Cesspits should be disinfected so long as they continue to exist, but their existence should be permitted no longer than may be absolutely necessary. Several cesspits in Georgetown, which he knew to have been previously infected, have since been obliterated and the pail system substituted. Much has been said for and against the pail system, but he recollects cases of yellow fever recurring after efforts have been made to disinfect a cesspit, but cannot remember any case of yellow fever recurring in any house in which the pail system was properly carried out.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 6014 births and 3264 deaths were registered during the week ending Oct. 31st. The annual rate of mortality in these towns, which had been 18·2 and 18·6 per 1000 in the preceding two weeks, declined again last week to 18·1. The rate was 17·0 in London and 19·3 in the twenty-seven provincial towns. During the first four weeks of the current quarter the death-rate in the twenty-eight towns averaged 18·3 per 1000, and was 1·9 below the mean rate in the corresponding periods of the ten years 1881–90. The lowest rates in these towns last week were 10·8 in Brighton, 12·0 in Huddersfield, 13·0 in Plymouth, and 14·0 in Portsmouth; the highest rates were 23·3 in Bradford, 24·3 in Manchester, 24·6 in Birkenhead, and 25·0 in Sunderland. The deaths referred to the principal zymotic diseases, which had declined in the preceding five weeks from 600 to 390, further fell last week to 332; they included 97 from diarrhœa, 63 from whooping-cough, 56 from "fever" (principally enteric), 44 from diphtheria, 37 from scarlet fever, 35 from measles, and not one from small-pox. No death from any of these diseases was recorded last week in Huddersfield; among the other large towns the lowest death-rates were recorded in Brighton, Derby, and Portsmouth, and the highest in Birkenhead, Manchester, Sunderland, and Preston. The greatest mortality from scarlet fever occurred in Salford; from whooping-cough in Plymouth, Bradford, and Cardiff; from "fever" in Norwich, Nottingham, Birkenhead, Sunderland, and Preston; and from diarrhœa in Manchester, Leicester, Blackburn, and Preston. The mortality from measles showed no marked excess in any of the twenty-eight towns. The 44 fatal cases of diphtheria included 31 in London, 4 in Manchester, 2 in Bristol, 2 in Leicester, and 2 in Newcastle upon-Tyne. No death from small-pox was registered in any of the twenty-eight towns, and no case of this disease was under treatment either in the Metropolitan Asylum Hospitals or in the Highgate Small-pox Hospital. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 1377, against numbers increasing from 947 to 1352 on the preceding seven Saturdays; the patients admitted during the week were 139, against 179 and 159 in the previous two weeks. The deaths referred to diseases of the respiratory organs in London, which had increased in the preceding four weeks from 171 to 266, were 270 last week, but were 117 below the corrected average. The causes of 73, or 2·2 per cent., of the deaths in the twenty-eight towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Bristol, Leicester, and in five other smaller towns; the largest proportions of uncertified deaths were recorded in Wolverhampton, Hull, Halifax, and Huddersfield.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 18·7 and 19·0 per 1000 in the preceding two weeks, further rose to 22·5 during the week ending Oct. 31st, and was 4·4 above the mean rate that prevailed during the same period in the twenty-eight large English towns. The rates in the eight Scotch towns ranged from 13·1 in Edinburgh and 13·3 in Paisley, to 28·7 in Perth and 29·5 in Greenock. The 578 deaths in these towns showed an increase of 88 upon the number in the preceding week, and included 13 which were referred to whooping-cough, 10 to scarlet fever, 9 to diphtheria, 8 to diarrhœa, 7 to measles, 5 to "fever," and not one to small-pox. In all, 52 deaths resulted from these principal zymotic diseases, against 61 and 52 in the preceding two weeks. These 52 deaths were equal to an annual rate of 2·0 per 1000, which was slightly below the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 8 in each of the preceding two weeks, rose last week to 13, of which 8 occurred in Glasgow and 3 in Greenock. The 10 deaths referred to scarlet fever exceeded by 3 the number in the previous week, and included 6 in Glasgow and 3 in Aberdeen. The fatal cases of diphtheria, which had declined from 12 to 5 in the preceding three weeks, rose again to 9 last week, of which 4 occurred in Glasgow and 2 in Edinburgh. The 7 deaths from measles were all recorded in Glasgow. The 5 fatal cases of "fever" showed a further decline from recent weekly numbers, and included 2 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 111 and 98 in the preceding two weeks, rose again last week to 158, and exceeded by 40 the number in the corresponding week of last year. The causes of 51, or nearly 9 per cent., of the deaths in the eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 24·6 and 23·0 per 1000 in the preceding two weeks, rose again to 24·2 during the week ending Oct. 31st. During the past four weeks of the current quarter the death-rate in the city averaged 23·7 per 1000, the rate for the same period being 17·1 in London and 15·3 in Edinburgh. The 161 deaths in Dublin during the week under notice showed an increase of 8 upon the number in the previous week, and included 7 which were referred to "fever," 6 to diarrhœa, 3 to whooping-cough, 1 to diphtheria, and not one either to small-pox, measles, or scarlet fever. In all, 17 deaths resulted from these principal zymotic diseases, equal to an annual rate of 2·6 per 1000, the zymotic death-rate during the same period being 1·7 in London and 1·0 in Edinburgh. The fatal cases of "fever," which had been 9 and 5 in the preceding two weeks, rose again to 7 last week. The deaths referred to diarrhœa, which had been 9 and 10 in the previous two weeks, declined to 6 last week. The 3 fatal cases of whooping-cough were within one of the number in the previous week. The 161 deaths registered in Dublin included 30 of infants under one year of age, and 40 of persons aged upwards of sixty years; the deaths of infants showed a further decline, while those of elderly persons exceeded those recorded in any recent week. Two inquest cases and 3 deaths from violence were registered; and 51, or nearly a third, of the deaths occurred in public institutions. The causes of 24, or nearly 15 per cent., of the deaths in the city were not certified.

Correspondence.

"Audi alteram partem."

"THE ELECTION OF DIRECT REPRESENTATIVES"

To the Editors of THE LANCET.

SIRS,—Your readers may expect us to notice some of the letters called forth by our election circular. We ask you to let us express our deep gratitude for a very large and kind expression of confidence from all parts of England and Wales, in private letters too numerous to be individually answered. We also claim your indulgence to reply to more critical electors who have written in your columns or elsewhere. Dr. Hugh Woods is dissatisfied because we "initiate no new policy." Surely the administrators of Acts of Parliament should not be expected to initiate new policies, but to find out their duties and do them. Another very candid friend is Dr. Rentoul. His method of dealing with candidates savours somewhat, however unintentionally, of persecution, and he contrives to put his ten questions very much into the shape of ten commandments! We are not disposed to answer Dr. Rentoul's questions further than in the general replies already given, and he will forgive us for saying that after our action in the last five years his importunity is unreasonable, and we believe is felt to be so by the great majority of the profession. On one question we shall be more explicit—that of midwives. It will, we think, surprise the statesmen to whom we owe the principle of direct representation to learn that a section of the profession, even if a small one, would make an election turn on resistance to such a minimum amount of training in midwives as would enable them to know when to send for a doctor. We are of opinion that the Medical Council has discharged its duty on this subject, and we do not think it is called on to deal further with it, unless asked for suggestions by the responsible Government of the day. When so asked, the committee which we have moved for and secured will do its best to safeguard the interests of the profession, while remedying the awful evils of the existing system, the responsibility for which must now rest with the public. We hold it to be the highest indiscretion to represent the "interests" of the profession as inconsistent with any reasonable legislation for the abatement of these evils, and we can conceive nothing more disastrous to the prospects of direct representation than for the profession to assume an attitude of blank resistance. Our desire is to see every woman in the risks of childbed provided with *full medical attendance*, or the means of securing it on the slightest emergency, without delay or doubt.

We come now to the letter of Professor Struthers. The Emeritus Professor of Aberdeen, in the wantonness of newfound leisure, and with questionable taste, sees fit to intervene in the election for English direct representatives. We might safely leave his somewhat unkind remarks to the judgment of your readers, aided by the more judicial and fair letter of Dr. Wilks. But a few words of reply may be expected of us.

First, let us promptly disown the thought or wish of seeing the Council deprived of such members as Mr. Teale, Sir Richard Quain, or Sir John Simon. They are such men as are sure to find places in the Council as representatives of medical authorities. If not, so much the worse for the authorities. As to our efforts in the matter of medical education: It is ungracious and incorrect in Professor Struthers to represent us as unhelpful in respect of attempts to improve the preliminary education of medical students and the scientific basis of medical education. We gave our hearty support to both these objects. He minimises our attempts to improve the practical element. This is scarcely to be wondered at in a representative who confessed, if he did not boast, that he had never attended a labour in his life, and whose University required of her graduates attendance on only six labours as an education in practical midwifery. Will Professor Struthers deny that before the admission of direct representatives the Medical Council's regulations did not require or suggest any proof of a candidate ever having seen cases of insanity, of scarlet fever, and other infectious diseases; or that it was at the instigation of the direct representatives that the Government was successfully moved to legislate for the admission of students to the hospitals of the Metropolitan Asylums Board for clinical study; that the standard of examination for health diplomas has been jealously guarded; and that medical officers of health should hereafter be required to give proof of some acquaintance with the diseases of animals communicable to man? We shall not debate the respective independence of direct representatives and those who represent medical authorities. The profession and our fellow-members in the Council will not be seriously misled by Dr. Struthers.

We remain, Sirs, your obedient servants,

C. G. WHEELHOUSE,
B. WALTER FOSTER,
J. G. GLOVER.

Oct. 3rd, 1891.

To the Editors of THE LANCET.

SIRS,—Will you kindly give me space for two observations concerning the coming election to the General Medical Council, on points concerning which manifest error ought, I think, to be corrected? Dr. Alderson and Mr. George Brown come forward as candidates professedly on the ground that they being general practitioners, and that the principle of "direct representation" having been won for "general practitioners," no one but a "general practitioner" ought to be elected to represent them. Surely there is a fallacy here. For years before we won the right to "direct representation," I, with many other members of the Council of the British Medical Association who worked hard to obtain it—and notably the late Dr. Edward Waters of Chester—spared no effort to show that while the Government and all the medical corporations, as such, were amply represented, the profession, as a profession, had no representation at all, and that it ought to have; but it never seemed to occur to any of us that the profession consisted only of general practitioners. What we fought for, and what, mainly through the incomparable efforts of Dr. Waters (himself not a general practitioner), we won, was representation for the whole profession, whether physicians, surgeons, or general practitioners, and not for general practitioners exclusively. Secondly, in a private letter which I have received from Mr. George Brown, which (without his permission) I do not feel at liberty to publish, I am told that it would be a graceful act on my part, and on that of Sir Walter Foster, if, not being general practitioners, we were to retire in favour of himself and Dr. Alderson as being such. I should very much like him to publish his letter and my reply; but, as I fear he will not care to do that, I ask you, Sirs, to permit me to state, as I did to him, that if the laborious work of the daily and nightly practice of medicine, surgery, and midwifery in one of the largest practices in the fifth largest town in the kingdom for thirty years constitutes "general practice," I can, at any rate, claim to have done that, and that if, after experience so accumulated, others, in later years, have learned to think my opinion worth having in consultation, I fail to see how that fact renders me less likely to be able efficiently to represent the interests of general practitioners. Fortunately for my cause, I have old pupils scattered through the length and breadth of the land who know my career better than Mr. Brown seems to do, and I feel that I can safely leave the advocacy of my cause in their hands.

I am, Sirs, yours faithfully,

C. G. WHEELHOUSE, F.R.C.S.Eng., L.A.S.Lond.

Cliff Point, Filey, Yorkshire, Nov. 1891.

To the Editors of THE LANCET.

SIRS,—The day for nomination of candidates for the election of direct representatives to the General Medical Council is drawing near, and soon, I presume, we shall learn how much contest there is to be. It is a pity that there should be any contested election in any of the three divisions, and for these reasons: the present representatives have done their work excellently well, and they have earned their right to obtain their seats without trouble or further expense. The cost of these elections is great, and when our representatives have accomplished all that we could have expected of them, considering the small numerical proportion they bear to the representatives of the universities and licensing corporations, it would be a graceful and courteous act to return them unopposed. This election, unlike Parliamentary contests, does not turn upon the questions of party politics, and therefore

the only consideration we have to deal with is whether the representatives have fulfilled the trust which was imposed upon them. I feel sure that the bulk of the profession will agree with me that they have done so. Why, then, should any one of us, by coming forward as a candidate, put these brother members to needless expense and trouble? If either of them had neglected his duties or falsified his trust there would be reason for doing so, but under the present circumstances there is neither rhyme nor reason for such treatment. It takes a member no little time to get into the swing of work at the Council and to understand its *technique*, and if we are to replace our representatives every five years by fresh ones, a considerable amount of power must be lost whilst these are picking up their duties. Again, by returning Sir W. Foster, Mr. Wheelhouse, and Dr. Glover, for England and Wales, we shall be sending back to the Council tried men—those who in their trial in the furnace of public opinion have not been found wanting. We do not want to be represented by men whom the Americans would call "cranks"—men with some pet fad or other, which they would try to inflict upon the Council and upon us, to the infinite damage of the cause of direct representation. We require men who, knowing the real, not fanciful, wants of the general practitioners from actual and personal contact with their work in their daily life, will do their level best to get from the Council such legislation as will benefit the 98 per cent. of the "rank and file." I will not trouble your space further, but ask your help in making this suggestion known to your readers as electors.

I am, Sirs, yours truly,

A. GEORGE BATEMAN,

Longridge-road, S.W., Nov. 1891. Hon. Sec. Medical Defence Union.

To the Editors of THE LANCET.

SIRS,—In reply to the letter in THE LANCET of to-day by Dr. Wilks I would ask for space to observe that, although the existence of the General Medical Council is for the better government and for the better regulation of the profession, and exists, I allow, paramountly in the great public interest, yet it exists too (at least, I think so, and ought to exist), although in a lesser degree, for the well-being of the profession. Nay, further, it is for the public benefit that the General Medical Council should exist for these mutual interests; and it is not, I am sure, for the true public good that the interest of the profession and its members that they should be so entirely ignored as it would appear they ought to be, to read and judge by Dr. Wilks' letter. I could, if space and time permitted, give many proofs that the truest interests of the public and the interests of the profession are not infrequently identical, and, alas, in such mutual interests the distasteful question of fees must sometimes, and rightly and properly, occur. "The labourer is worthy of his hire." To totally disregard the question of adequate remuneration of the doctor is inimical to the morality and good of the British public. Dr. Wilks demurs to the General Medical Council being termed the "Medical Parliament." Now, one of the meanings of the word "parliament" is *a deliberative assembly* (*vide* Nuttall's Standard Dictionary, 1886); *ergo*, I affirm it can be no misnomer to term the General Medical Council the "Medical Parliament," in contra-distinction from the numerous other councils that exist in the profession.

I am, Sirs, your obedient servant,

Oct. 31st, 1891. FREDERICK H. ALDERSON, M.D.

To the Editors of THE LANCET.

SIRS,—As one of the candidates for a seat on the General Medical Council, I shall feel obliged by your allowing me a little of your valuable space to reply to the letter of Dr. Samuel Wilks published in your issue of the 31st ult.

He commences his letter by stating that he supports the re-election of the present members "lest we might have the presence of some gentleman, the so-called representative of general practitioners, who would do his best to destroy the institution." Who is the destructively inclined individual here referred to? Dr. Wilks may have special information, but I know of no general practitioner who wishes to destroy the Council. Many of us, however, are anxious that it should more fully discharge its duties.

Dr. Wilks next suggests that those who criticise the work of the Council have never read the Medical Act. He himself has read it to little purpose if all he can gather from its clauses is that they "pertain to the proper qualification of men before they can be put on the Register." What about Sections xxviii., xxix., xl., xli., and xlii., which relate to the removal of persons from the Register and the prosecution of unregistered practitioners? Dr. Wilks and his colleagues ignore these clauses which are among the most important in the Act.

Dr. Wilks claims that as the Council created by the Medical Act, 1858, is designated the "General Council of Medical Education and Registration," its duties end in carrying out what its name implies. I would remind him that the Act was not passed simply to regulate the education of doctors, but, as the preamble states, to enable "persons requiring medical aid to distinguish qualified from unqualified practitioners." Beyond publishing the Register, I have yet to learn that the Council has done anything to help the public to distinguish qualified from unqualified practitioners of its own initiative. This branch of its duties has been left to medical defence associations. We as general practitioners contend that the penal clauses of the Medical Act, 1858, should be put in force by the Council, and that private practitioners should not be compelled to become common informers, and bear the odium and expense of prosecuting unregistered persons who practise medicine.

One other statement of Dr. Wilks calls for notice. He says that if the subject of payment of medical men had been seriously discussed at the Council, "the President of the Privy Council would have turned us out and locked the door." Let Dr. Wilks make his mind easy on this score. The President of the Privy Council has no more power to lock the door of the Medical Council chamber than he has to turn the key on the House of Lords. The General Medical Council derives its powers from the Legislature, and only the Legislature can take them away.

I am, Sirs, yours truly,

GEORGE BROWN,

Nov. 2nd, 1891. President of the General Practitioners' Alliance.

DIRECT REPRESENTATION OF SCOTLAND.

To the Editors of THE LANCET.

SIRS,—Having been favoured by Dr. Bruce of Dingwall with a copy of his address soliciting the votes of general medical practitioners in Scotland to elect him as their representative in the General Medical Council, it has occurred to me that the time had now arrived for the reconstitution and radical reform of that Council. At present, owing to its constitution, the deliberations of its members are restricted almost entirely to conserving the privileges and interests of the universities and licensing corporations, to the almost complete exclusion of the interests of the general body of the profession as represented in the general practitioners throughout the country. To remedy this state of matters, I think, in my humble opinion, the only plan is to entrust the power of election of *all* its members in the hands of the general practitioners, who can, surely, as educated gentlemen, select the most eligible candidates likely to uphold the dignity and safeguard the privileges and rights of both practitioners and the licensing bodies. Till this happens common justice cannot be done to the profession, and it behoves all practitioners to agitate for the introduction of an Act of Parliament by some influential member of the House of Commons to effect the necessary change in the Council's constitution. That the present Council has effected some small amount of good to the profession I concede, but its exclusiveness and general incapacity have been too often demonstrated—as, for instance, in its treatment of the revision of the British Pharmacopœia, which should have been entrusted to practical and experienced pharmaceutical chemists, who would have been better acquainted with the needs of practitioners, and who would not have made the ludicrous mistakes which appear on several of its pages. It is nothing less than scandalous to think that the Council should have invested in it what no other judicial court in the country has—viz., the powers of judge, jury, and prosecuting counsel all bound up in one body. Why should not medical men on trial for alleged misdemeanour be judged in a righteous manner? Dr. Bruce refers to this subject in his address, and states that he would leave the power of prosecution with the licensing bodies. This is all very well, but there would still be a

chance of prejudice arising, and possibly also of the bodies themselves shirking their duties. It would be absolutely necessary, at all events, to have a public prosecutor who would initiate the proceedings and be independent of all private influence. Another matter of considerable interest to the public and profession alike referred to by Dr. Bruce is that of granting diplomas to women to qualify as midwives. That women are *physically* unfitted to the tear and wear of night-work especially is, I think on reflection, open to reason, although intellectually capable of undertaking the duties of a skilled obstetrician, and I think no encouragement should be given them to prosecute this department of medical science. I always can bring to my remembrance what my esteemed friend and former teacher, the late Dr. Matthews Duncan, said regarding this—viz., that until the study and practice of midwifery were taken from the hands of women and relegated to men it would never advance as a science to a high state of proficiency. In this I believe he referred more particularly to France. Until a Minister of Health, holding a seat in the Cabinet, is also created, all matters pertaining to the public health can never have the prominence assigned them necessary to the welfare of the community; and surely such an office is as important to the nation as that of Agriculture? The late lamented Lord Beaconsfield was deeply impressed with a sense of the necessity of attention to all matters affecting the health of the community, and he often gave utterance in his speeches to its great importance. Will no statesman living endeavour to emulate the example of the late distinguished and brilliant Prime Minister by suggesting to the Government the creation of such a department?

I am, Sirs, yours faithfully,

JOHN COCHRANE, L.R.C.P., L.R.C.S. Ed.,
Medical Officer for Kirkcowan, Wigtown;
Oct. 27th, 1891. Certifying Factory Surgeon, &c.

THE USE OF ANTISEPTICS.

To the Editors of THE LANCET.

SIRS,—It seems as difficult to conduct a discussion about Listerism as it is on a point in theology, there is so much difficulty in getting my adversaries either to admit my definition or to advance one of their own. I have made my definition clear enough in my first letter, and I have repeated it more or less completely in my others; yet in your issue of to-day there comes up another controversialist, who either has not read my definition or who coolly ignores it. In answer to Mr. E. Wearne Clarke, I have to say that I am not prepared to reject *in toto* the whole theory of the causation of fermentation and putrefaction of micro-organisms. Not only so, but I go further than Mr. Wearne Clarke, and say it is nonsense any longer to call the vast array of such facts a "theory." But I dispute the cardinal doctrine of Listerism, which is that the processes of disease in the living body are universally analogous to the processes of fermentation and putrefaction as seen in the glass bottles of the bacteriologists. It is the wholesale attempt to establish what is called the germ theory of disease to which I object. Here and there doubtless the process of putrefaction possesses a close analogy in certain restricted instances—indeed, one might almost say that identity with one or two have been proved; but it must be evident to the merest tyro in the observation of the facts of clinical medicine and surgery that the germ theory of putrefaction cannot be universally established as a germ theory of disease. There is one region where the whole chain of argument breaks down absolutely, and that is in its application to surgery and surgical operations. Mr. Charles H. Taylor is an especially good specimen of the theological arguer. I have fixed him on the horns of a dilemma, but he simply ignores it. I have advanced a definition to which I have directed all my energies for the last fifteen years, and upon it I invite discussion. This he also ignores, and manufactures for me and attributes to me one of his own contrivance, which I altogether repudiate. Mr. Taylor does not even take the trouble to repeat accurately the incidents of the discussion, for it was not the eminent gynæcologist who attacked the eminent dentist, but the opposite.

Thanks to your courtesy, Sirs, I have now repeated my definition of Listerism, my beliefs concerning it, and my reasons for having disregarded it, in no less than four recent issues of THE LANCET. The meaning of my words must be clear enough; there can be no difficulty in understanding them. I shall not, therefore, consider it worth while to reply further to any more evasions or misrepresentations; but to any logical or legitimate criticism I shall give the most respectful attention.

I am, Sirs, yours faithfully,

Birmingham, Oct. 31st, 1891. LAWSON TAIT.

To the Editors of THE LANCET.

SIRS,—Mr. Lawson Tait is an amusing controversialist, never more entertaining than when as a rigid logician he is falling foul of the dialectical methods of his opponents, or picking out a carelessly composed subordinate clause and solemnly calling his readers' attention to it, as though it vitiated the whole argument, and established at once Mr. Tait's position. Mr. Tait's position is, however, far from established, and certainly he has laid himself under deep obligations either to establish it or to admit his inability and confess his mistake. Let us not lose sight of the main issue. Mr. Lawson Tait has repeatedly written in terms of scorn and contempt of the antiseptic system of surgery; he has denounced the use of antiseptics as a "craze," and likened antisepticism to one of those "systems" founded on superstition and without any scientific basis, which were in vogue in bygone credulous eras. When asked for some justification of these sweeping condemnations, it turns out that he has only one solid fact to produce. He is obliged at once to confess that he knows nothing whatever about the use of antiseptics in general surgery; that for more than twenty years he has devoted his attention exclusively to a very narrow field of operation upon the abdomen; and he bases his dogmatic assertions on the solitary fact that he has had a high average of successful results in the special class of cases to which his practice has been exclusively confined. Mr. Tait's success no doubt constitutes an interesting fact; and when we are informed in full detail what exactly he implies by "cleanliness"—upon the observance of which he insists—the fact may no doubt be discussed with profit; but this solitary fact, remarkable as it may be, is not enough alone to overthrow the antiseptic system of surgery. That system is fixed on a foundation of solid science. I, in my first letter, and Mr. E. Wearne Clarke in THE LANCET of to-day, have sufficiently indicated what are the facts which make up that foundation, and these facts must be destroyed by Mr. Tait before he can have much right to demand attention to arguments drawn from either theory or practice, or any valid claim to lay down the law in the way he has attempted. Is Mr. Tait prepared to show that the views as to the nature of putrefaction and fermentation, and the production of septic decomposition in organic tissues, which are accepted by the whole scientific world, are false, and all the facts bearing upon the subject which have been demonstrated by Pasteur, Koch, Lister, and their followers are delusions? If these views and facts are false, let Mr. Tait prove it; if they are true, an antiseptic system of surgery is called for as a logical necessity. If since the first inception of an antiseptic system every device and every therapeutic measure for promotion of asepticism had turned out a grotesque failure (which is the reverse of true), the principles of antisepticism would still have remained unshaken, and it would have been the duty of the surgeon to persevere with his experiments until means adequate for the desired end had been devised. The experimental stage in the evolution of a perfect system of antiseptic surgery is still in progress; and the occasional changes in materials and modes of employing them which so strangely excite Mr. Tait are mainly the results of slow yet certain progress towards methods ever more simple, more efficient, and more sure.

I am, Sirs, your obedient servant,

Wimpole-street, W., Oct. 31st, 1891. HENRY SEWELL.

THE RECENT CENSUS IN KENSINGTON.

To the Editors of THE LANCET.

SIRS,—There is one particular in my report on the above subject not referred to in the article in THE LANCET of last week to which I should like to invite your attention—viz., the number of inhabited houses in 1891 as compared with the number in 1881, the increase being 1831, which, at 8·08 persons to a house (as in 1881), would give an increase in population of 14,794, the enumerated increase being only

3170. Between 1861–71 every additional house represented an increase in population of 8·01 persons; between 1871–81 each newly inhabited house represented 9·38 persons; but between 1881–91 each new house represents 1·73 persons only. How is this difference to be explained? Or the fact that, with an increase of 755 in the number of births in the more densely populated sub-district (to say nothing of excess of births and deaths = 11,244), which, on the 1881 scale, would have represented an increase in population of 6100, there is an enumerated decrease of 1372? In all London, between 1881–91, each additional house represents six persons; in Kensington each house, as stated, represents 1·73 only. You opine that Kensington has now reached a stage in its development when it can no longer absorb the whole of its natural growth by excess of births over deaths. The census returns show that 10,387 persons, a large proportion of that natural growth, has been lost to us, and yet the fact remains that the newly inhabited houses, on the 1881 scale, would have provided accommodation for something more than the total of natural growth—viz., 13,557 persons.

I will only add that the census returns show a diminished density of population in 1891 compared with 1881, equivalent to 0·53 person per house, which, having regard to our daily experience and to the large increase in the number of compound houses let in "flats" (which are not separately enumerated), is inexplicable and wellnigh incredible. The reduced density of population in London in 1891 compared with 1881 appears to be 0·25 person per house, a difference which more than accounts for the discrepancy (115,526) between the estimated and the enumerated population.

I am, Sirs, yours faithfully,

T. ORME DUDFIELD,
Medical Officer of Health.

Town Hall, Kensington, W., Nov. 4th, 1891.

"CONDITION OF THE HEART IN DEBILITY."

To the Editors of THE LANCET.

SIRS,—Although Dr. Foxwell has adopted the word "debility" instead of "anæmia," he leaves it to be inferred from a footnote that nearly half his cases were suffering from anæmia; and, at any rate, it is quite evident that the condition of heart described accords very closely with that found in a large proportion of cases of anæmia. Many of the points mentioned by Dr. Foxwell, and which are not in accordance with the usual teaching, I can confirm, and I have already called attention to them in a paper on "The Condition of the Heart in Anæmia, and the Cause of the Pulmonary Murmur," published in the *International Journal of the Medical Sciences* for December, 1890. I there say: "In a definite class of cases of anæmia, including chlorosis, cardiac dilatation is a constant and important condition, which urgently requires more general recognition and treatment; and in such cases the *right side* is often the one chiefly affected." The dilatation of the heart in anæmia is now becoming recognised, but when my paper was written it was not generally taught that the dilatation affected chiefly the *right side*. "The characteristic of the so-called hæmic pulmonary murmur is that, though audible frequently in all the areas, its point of maximum intensity is in the second or third left interspace (usually the second) close to the sternum; *and that it invariably becomes much less loud, and frequently totally disappears in the erect position.*" Dr. Gee says: "Murmurs audible in the horizontal position sometimes become much less loud and long in the erect—nay, occasionally altogether cease. This is most frequently the case with presystolic murmurs produced at the mitral orifice." This was the only previous reference I was able to find, and it is inadequate to describe a phenomenon which is invariable for that class of murmurs. It has also been noticed by several observers, and I can confirm it myself, that these pulmonary murmurs usually disappear during full inspiration, especially if the patient holds the breath. I have suggested possible explanations of that in the same paper. "*This pulmonary systolic murmur*, disappearing in the erect position, *is due to the pressure of an enlarged, flabby, and dilated heart on the pulmonary artery.*" This seemed to me the most reasonable explanation of the disappearance of the murmur in the erect position and its production in the horizontal (supine), for the heart is capable of considerable movement within the chest. When the murmur is still audible in the erect position, the dilatation of the right side is probably sufficient by its upward pressure to bring about a similar change in the pulmonary artery. In one case of dilatation of the right heart Dr. Foxwell found the pulmonary valves as high as the first space. It is very possible that the carrying of the heart to the left by the dilatation of the right ventricle may, as Dr. Foxwell says, sharpen the curve of the pulmonary artery and impede the flow through it, and so in part account for the murmur. But this displacement will not account for the remarkable variation in the intensity of the murmur and its not unfrequent disappearance in the erect position, for naturally the dilatation of the right heart remains fairly constant, and, if anything, would be greater during the exertion of maintaining the erect position than in the recumbent. But I have further suggested that this upward pressure may be increased somewhat during the systole by the "base beat." I suppose the pressure to be communicated chiefly through the fibrous ring surrounding the orifice of the pulmonary artery. The counter-pressure would be partly the general fixity of the pulmonary artery by the passage of its branches into the roots of the lungs, and partly the arch of the aorta, in which the vascular tension is higher and the vessel therefore firmer, and which is held in position by the large branches coming off from it, and by the general connective tissue investment." Dr. Russell's theory Dr. Foxwell has explained. Dr. Bristowe some time ago expressed the view: "I should think it is connected with some want of due relation between the quantity of blood expelled from the ventricle in a given time and the size and tension of the pulmonary artery." The statements that one frequently sees—that the murmurs of anæmia disappear after a two or three weeks' course of iron—would not, I think, be made if the patients were auscultated in the recumbent position as well as in the erect.

I am, Sirs, yours, truly,

H. HANDFORD, M.D., M.R.C.P.,
Physician to the General Hospital, Nottingham.

Oct. 31st, 1891.

THE ETIOLOGY OF INFLUENZA.

To the Editors of THE LANCET.

SIRS,—In your issue of Oct. 17th a short paragraph occurs which is so singularly confirmatory of my theory of the etiology of influenza that I cannot refrain from calling attention to it. Your Australian correspondent says that at a recent meeting of the Victorian Medical Society Dr. J. B Ross gave a description of a new pulmonary disease he thinks he has discovered, and which is caused by an aspergillus. The disease resembles pleuro-pneumonia, the pneumonia being quite superficial and not involving the lung deeply; the sputum was found to contain "pus, blood, free fat, globules, epithelial flakes, aspergillus spores, saccharomyces, and blastomyces." Of the six cases reported Dr. Ross said: "I think I am entitled to state that they are neither pneumonia fibrinosa, pleuritis exudativa, nor pleuro-pneumonia. They must be, then, a new form of disease, and I would propose to call it 'pneumonia mycotica.'" In all the cases some species of saccharomyces was found, and it was contended that "the fungi prepared the soil and so enabled the moulds to grow, fructify, and propagate."

In a communication to THE LANCET of June 13th I stated that I was now not only convinced that influenza was due to a germ-laden atmosphere, but I suggested the spores of the very germ in question—aspergillus fumigatus—as being possibly the exciting cause of the disease. I was led to this conclusion from noticing the many points of resemblance between influenza and hay fever—a fact which has probably struck others, for I see Dr. Sisley recommends the application of a solution of boric acid to the conjunctiva as a prophylactic measure in influenza epidemics.

The experiments of Schütz prove that breathing for only a few minutes an atmosphere laden with the spores of aspergillus fumigatus produces pneumonia in fowls. Flügge also states that extensive epidemics of pneumonia mycotica often occur in zoological gardens from the same cause; cows are known to have suffered in a similar manner, and the spores of the aspergillus have been found in diseased human bronchial passages and the sputum of dead bodies. M. Potain, in *L'Union Médicale* of March 26th, 1891, refers to a disease which he calls "Tuberculose aspergillaire" (aspergillary phthisis), in which, however, no tubercular bacilli could be found, but abundant spores of aspergillus were detected in the sputum. Aspergillus fumigatus is a minute, bluish-grey

mould, very common in brown and barley bread &c.; the conidia are colourless, varying from 1 m. to 2·5 m. in diameter, and, what is especially noteworthy, thriving best at from 37° C. to 40° C., just the heat they meet with in the human body. According to Siebenmann these spores are very widely diffused, and it is quite conceivable that under favourable conditions of heat and moisture they might increase and multiply to an enormous extent, and be extensively disseminated by air currents over vast tracts of country. All evidence during the recent epidemic seems to point to an atmosphere impregnated with pathogenic germs, and it is not a little significant that the period of greatest influenza intensity was marked by comparatively mild, moist, and "muggy" weather. The suddenness of the invasion of influenza, the large numbers simultaneously attacked, the extreme rapidity with which it spreads, and the apparent caprice of its course, all point to an air-borne contagium. In suggesting this theory as to the etiology of influenza, I do not, I need hardly say, wish to assert dogmatically that the spores of the aspergillus fumigatus are absolutely the cause of this obscure disease, but merely that it is more than possible that they or some allied fungus or spore may originate it, and to suggest to those who possess the requisite skill and apparatus a line of research which, I believe, may help to solve this difficult question.—I am, Sirs, yours truly,

CHAS. EGERTON FITZGERALD, M D.

Folkestone, Oct., 1891.

"NEW GUNSHOT WOUNDS COMPARED WITH OLD."

To the Editors of THE LANCET.

SIRS,—Under the above heading your Berlin correspondent, in your issue of Oct. 31st, p. 1019, draws attention to Thurnwald's statement that by the new bullets "the soft parts are less bruised, and the bones less shattered." In the "Surgical Report of the Belfast Riots," as published by me,[1] referring to the changed character of the bullet wounds of the day, is the following: "I think the altered shape and greater velocity of the modern rifle bullet has much to do with the result. To me it appears less of a crushing and more of a cutting missile, and a study of the records of military surgery from the time of Hunter, Bell, Larry, Guthrie, Hannen, Longmore, and the surgery of the American civil war, will show that, in proportion to the increase in velocity of rifle bullets so did the sloughing from gunshot wounds diminish." The fact that the slow velocity is the principal cause of the bruising is first, I think, suggested by Richard Wiseman in the introduction to his treatise on "Gunshot Wounds," in which the following passage occurs: "What I have said of gunshot happeneth at sea frequently by a splinter, which, though it may have lost its force to make a wound, yet it sometimes bruiseth the skin to the flesh so forcibly as to extinguish the natural heat, and to make it black" (see ed. 1686).

I am, Sirs, yours truly,

Dublin, Oct. 31st, 1891. GEORGE FOY, F.R.C.S.I.

THE BELFAST ROYAL HOSPITAL.

To the Editors of THE LANCET.

SIRS,—I have seen a paragraph in THE LANCET headed "Belfast Royal Hospital," bearing upon a recent inquest in that institution and the sanitary condition of the hospital. Were it not that I am in the midst of scholarship examination papers in connexion with Queen's College, Belfast, and that other matters of a grave character press upon me just now, I should have been disposed to furnish you with a full and complete statement of the case as it came before me at the inquest. In the meantime, may I request you will be so good as to insert in an early issue of your valued periodical, the report of the medical and surgical staff of the Belfast Royal Hospital, with my short statement in reply, as they appear in the Belfast papers. I herewith forward them for your use. The short statement which appeared was all the length I considered it necessary or right to go in the daily papers; but as the subject has been entered upon in THE LANCET, I hope you will see the propriety of giving publicity to the "report," and also to my brief reply. The subject has been much commented upon here in professional circles, and it has naturally excited considerable interest. I should therefore desire to see the whole question more fully and candidly dealt with than it has been yet in the medical press. I should say that a medical periodical is the proper quarter to discuss it. Should circumstances allow me, I hope to make, at not too remote a period, such a reply to the "report" as to show that in place of the Belfast Royal Hospital being in a proper sanitary condition, and well suited to the safe and successful performance of capital operations within its walls, this institution has been, and still is, in a foul, impure, and objectionable condition for the reception of medical and surgical patients. The staff of the hospital have been coerced into this controversy; their position and relationship to this institution and to its board of management are such that they cannot afford to dispute their arbitrary authority, as their existence or non-existence as members of the staff absolutely depends upon the favour or the frown of the former. More of this, I hope, hereafter.

I am, Sirs, yours faithfully,

Oct. 31st, 1891. R. T. DILL.

*** We fear, with the existing pressure on our space, we cannot open our columns to what would no doubt prove a prolonged discussion, whilst the issues involved are mainly of local interest.—ED. L.

[1] Med. Press & Circ., Sept. 1st, 1880.

THE OPERATION OF COMBINED PYLORECTOMY AND GASTRO-ENTEROSTOMY.

To the Editors of THE LANCET.

SIRS,—He is a daring man who, in these days, can confidently affirm—"The case I am now reporting is the first in which the operation has been performed in this country." This is what Mr. Bowreman Jessett says of his excellent case of combined pylorectomy and gastro-enterostomy, published in THE LANCET of Oct. 24th; and he has fallen into error, for an operation on exactly the same lines was performed by me in the Bristol Royal Infirmary on March 25th, 1891. Some of us may think that the terms "first," "first published," "first successful," "first successful published," and so forth, might be applied to operations with more propriety by others rather than by the operator himself. If "first" has to be applied to my operation, there can be no harm in speaking of it as the "first unsuccessful" case, and in saying that an account of it, or as much of it as is worth recording, has been in print for five months, and will be published soon. I may add that I wrote to Mr. Jessett and told him of my case, for I believed that he would like to correct his error in the current number of THE LANCET. As he has not done so, I venture to do it for him.

I am, Sirs, yours faithfully,

Clifton, Bristol, Nov. 2nd, 1891. J. GREIG SMITH.

To the Editors of THE LANCET.

SIRS,—In your issue of Oct. 24th, Mr. Jessett publishes a case in which he had performed the operation of combined pylorectomy and gastro-enterostomy with success on a patient suffering from pyloric cancer—a result which is most satisfactory. This operation was performed on Aug. 4th, 1891, and in his paper (p. 923, line 22) he says: "The case I am now reporting is the first in which the operation has been performed in this country." This is scarcely correct. On July 9th, 1890, I saw a case of pyloric cancer in consultation, which I thought a very suitable one for removal. Dr. Lowson was chosen as the surgeon, and on July 25th, 1890, he performed the operation of combined pylorectomy and gastro-enterostomy. The case, which was not successful, has not been so far reported, but the merit of being the *first* to perform the operation in this country belongs rather to Dr. Lowson than to Mr. Jessett.

I am, Sirs, yours obediently,

Hull, Oct. 31st, 1891. FRANK NICHOLSON.

REMOVAL OF A FRAGMENT OF STEEL FROM THE RETINA BY MEANS OF THE ELECTRO-MAGNET.

To the Editors of THE LANCET.

SIRS,—I have read with much interest the case reported in THE LANCET of Oct. 24th by J. Tatham Thompson, M.B., under the above heading. In the last paragraph of

the report it is stated, "So far as can be ascertained, the only cases previously reported of successful removal from the retina are those of Galezowski and Hirschberg." Allow me to inform Dr. Thompson that the case he has reported is similar to a case shown by me before operation to the Glasgow Pathological and Clinical Society in December last, and reported in the *Glasgow Medical Journal* for April, 1891. In this case, the right eye was struck with a chip of steel, which flew off the head of a hammer. The patient attended an eye hospital in England, and was treated for the small wound in the eye, but no foreign body was discovered. His sight gradually got worse, and he had pain in the eye, especially when at work. He came under my care at the Glasgow Eye Infirmary in November last, and on examination with the ophthalmoscope I discovered a dark body in the retina below the optic nerve, and presumably the chip of steel. I removed the chip of steel successfully by the electro-magnet through an opening made in the lower and outer quadrant of the eye. The patient and the small chip of steel extracted from the eye were shown to the Glasgow Pathological and Clinical Society in January, and the operation reported in the *Glasgow Medical Journal* for June, 1891.

I am, Sirs, yours obediently,

Glasgow, Oct. 27th, 1891. T. SPENCE MEIGHAN, M.D.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Compensation for the Demolition of Insanitary Property.

A VERY important question has recently been raised here, and has, it is hoped, been satisfactorily settled. Some recent proceedings were taken by the Corporation for the demolition of property which had been declared by the medical officer of health and the grand jury to be insanitary. The amount of compensation offered to the owners by an arbitrator appointed by the Local Government Board was, in two or three instances, considered insufficient. An appeal was therefore made by the owners, first to the Divisional Court, and subsequently to the Court of Appeal. The latter court held that the arbitrator should give some consideration to the rental value of the property, notwithstanding that the property was unfit for human habitation. The matter was subsequently referred back to the arbitrator, who has now issued a new award, the financial consequence of which is to increase the amount offered by the corporation to a sum midway between the amount originally offered and the amount claimed by the owners of the property. It is believed that this award will be satisfactory to the parties concerned.

Arrival at Gaol of a Dead Prisoner.

On Oct. 28th the city coroner held an inquest at H.M. Prison, Walton, on the body of a man who had been conveyed to the prison on Oct. 26th, and who died just as he was carried past the entrance-gate. Mr. Beamish, the principal medical officer of the prison, saw him immediately and found life extinct. A post-mortem examination was made by Mr. Lowndes, surgeon to the Liverpool police, in the presence of Mr. Beamish, about forty hours after death. Externally were two abrasions on the knees and some post-mortem stains on the thighs and legs. The right lung was almost entirely destroyed by disease, and the left indicated recent pneumonia. The heart contained an abnormal quantity of fat, and its walls were thickened. The liver showed commencing cirrhosis. The stomach contained a considerable quantity of food in an advanced state of digestion. The deceased was found begging in the streets of Birkenhead, and was taken to the Bridewell there, where he was detained till he could be brought before the magistrates. He had no cough, made no complaint of any illness, or any request to see a doctor. On Oct. 26th he was brought before the magistrates and committed to gaol for fourteen days. He was brought by a constable across the river by the steamer to Liverpool, where he appeared somewhat faint, but soon revived. A delay of forty minutes occurred before the train started, during which he was apparently quite well. In the train he was permitted to smoke, and did so with evident enjoyment. From the Walton station to the gaol is a short walk, and during this the prisoner suddenly fell to the ground on his knees. He was raised and carried into the prison, where he evidently breathed his last as he entered. This case shows the importance of every prisoner being carefully examined by a medical practitioner before being sent to prison. The jury made a presentment to the effect that provision should be made for the detention of prisoners at Birkenhead for a limited time rather than that they should be removed, handcuffed, to such a distance.

Hospital Sunday and Saturday.

At the annual meeting of those interested in the Hospital Sunday Fund, held on the 2nd inst., the mayor presiding, the report of the committee was read by the Rev. T. B. Banner, one of the honorary secretaries. The first paragraph, which lent considerable interest to the proceedings, was as follows: "On the 2nd Nov., 1870, a meeting was held at the Town Hall, at which it was determined 'That it is desirable to have collections made in all places of worship on one day on behalf of the medical institutions of the town, this day to be called the Hospital Sunday.' The day of the annual meeting this year is exactly the twenty-first anniversary of this inauguration, and it may possibly be interesting (the movement having now grown, as it were, from infancy to manhood) to recall one or two matters connected with its progress." The report proceeds to notice the choice of the second Sunday in the year, which, through evil and good report, has been maintained. The institution of Hospital Saturday, and its management by a separate body with most gratifying results, is next alluded to, as is also the principle on which the funds are distributed to the various medical charities. The Sunday collections this year were £6973 15*s.* 3*d.* (against £6949 last year), which, with bank interest (£64 11*s.*) and donations (£72 14*s.* 6*d.*), made the total £7111 0*s.* 9*d.* The Hospital Saturday collection amounted, with interest, to £3850 8*s.* 6*d*, making the total fund £10,836 12*s.*, out of which £10,800 was appropriated to the different medical charities. The whole expenses were comprised under the very moderate sum of £124 17*s.* 3*d.* for the Sunday collections, or 1·774 per cent., and £394 16*s.* 2*d.* for the Saturday Fund, or 9·283 per cent.

Nov. 3rd.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Salford Royal Hospital.

A DEFICIT of more than £1200 is the worst feature of the annual report of this institution. This deficit has been going on at the same rate for the past four years, and the committee point out that this cannot go on longer; either more funds must be obtained, or some of the wards will have to be closed. This latter alternative it is to be hoped will be averted. It is not long since the hospital was enlarged to 120 beds through the munificence of a townsman at a cost of nearly £30,000, but the difficulty is to increase the permanent annual subscriptions. To maintain these, seeing how much the income of our hospitals now depends upon the contributions of the masses of the people, it has been urged that a more democratic governing body would perhaps infuse a more widespread interest in our medical charities. Eighteen thousand persons received medical relief during last year, and, being the only hospital in Salford, strenuous efforts on the part of the management must be made unless this work is to be greatly curtailed. As a result of the appeal made at the annual meeting, a gentleman of Gateshead-on-Tyne (formerly of Salford) has sent the treasurer £100. It is not that people in Manchester cannot contribute, for our recent effort to raise money for the lifeboat funds has resulted in obtaining more than £5300, and for the relief of the Jews in Russia £2000 has been lately collected.

Royal Infirmary Extension.

In spite of protests made by a large and influential number of subscribers, the Board of Management of the Infirmary appear determined to proceed as far as they can with the extension scheme, and in a few weeks complete plans with full details will be ready for submitting to the governors, who have, however, not yet been permitted to offer any opinion as to the policy of such extension. Judging from the fact that a large section of the public, the corporation, and many subscribers as well as members of the medical staff are strong opponents to the project, it is most probable that some compromise will have to be come to with Owen's

College in their suggestions for the erection of a new hospital in Oxford-road. If the infirmary can afford to spend £100,000 on extension, it is argued they can better use the money by working harmoniously with the College and providing a new building altogether, further from the centre of the city and out of the noise and polluted air attaching thereto

Purification of Sewage.

Even the members of the Literary and Philosophical Society have been devoting themselves to the subject which at present looms very large in this district and county, and rightly so, as the question of purification of our rivers is intimately bound up with the working of the Ship-canal. When this has become *de facto* a great highway of commerce no such pollution as at present exists can be tolerated. A paper read last night at the above Society brought forward yet one more chemical method to the legion already tried as a sure purifier of ordinary sewage. In this county and city the problem is made up of two distinct factors: first, the pollution of the streams by ordinary excremental matters from large communities; and secondly, by pollution from waste products and refuse turned in from the numerous manufactories and works which stud the banks of the streams for many miles.

"Professors" of Mesmerism.

We have at present again in Manchester a man styling himself "Professor Kennedy," who some years ago, on his first visit here, was 'cute enough to get the then President of the Medical Society to arrange for a private exhibition of his mesmeric powers before the Society. The performance was described at the time in your columns, and the statement made that nothing which he did was deserving of any serious consideration from a strictly scientific point of view, and that many of his chief tricks could be explained by collusion on the part of his subjects. Singularly enough, with his present advent here a report appears of a prosecution at Bath by one of his "subjects" against another for theft, and between them they have "let the cat out of the bag," as they stated in evidence that they were paid by Mr. Kennedy to go about the country with him and pretend to come up voluntarily from the audience, to drink vile compounds of grease, oil, mustard, &c., and pretend they enjoyed it.

Cremation Society.

At the annual meeting of the Manchester Cremation Society a very satisfactory report was given. It has during the past year made steady progress, and the crematorium is fast approaching completion. It is believed that this will be one of the most perfect at present anywhere erected. The Society, as a society, has nothing to do with the crematorium, this being in the hands of a company, though practically it is the Society which has called it into existence, and it is to the Society one must look for any practical use being made of the same. The officers for the ensuing year include the names of Members of Parliament, clergymen, medical men, and others, and its efforts now are to be chiefly directed to influencing public sentiment in favour of cremation as a means of disposal of the dead in our large and crowded communities.

Nov. 4th.

NORTHERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENT.)

Newcastle-on-Tyne Home for Incurables.

THE new Home for Incurables at Newcastle, which has sprung out of a foundation of James I. for the relief of lepers, had its memorial stone laid last week. The home will provide accommodation for sixty-eight patients, and is planned on the semi-pavilion system so as to impart to it the character of a home more than a hospital. The cancer cases will be, however, in a distinct pavilion with a connecting corridor, and on the ground floor only; the corridors and staircases throughout will be of fireproof construction. The main corridors, spacious, well lighted, and warmed, will afford means of exercise for the patients in inclement weather. The new home stands on a site of nearly ten acres, part of which was occupied by the old building, which accommodated thirty patients, and was found insufficient for the purpose. It will cost, including furnishing, about £15,000.

The proposed Hospital for Wallsend District.

The Howdon Local Government Board are applying for a loan to enable them to erect the new hospital for infectious diseases for the Wallsend district. The building will cost about £8000, the plans for its erection have been passed, and it will soon be proceeded with. Thus a long-vexed question will at last be settled to the advantage of all concerned.

A new Swimming-bath for Newcastle Workhouse.

Some time ago Mr. Knollys, the Government inspector, drew the attention of the Newcastle guardians to the want of a swimming-bath at the workhouse, pointing out that, as it was a seaport town, some of the lads would be apprenticed as sailors, and that instruction in swimming was urgent. The guardians have now, at a cost of £600, provided a very fine bath, and it was opened by the mayor last week, some of the guardians taking "headers" with the boys.

Newcastle Clinical Society.

The first monthly meeting of the session of the Newcastle Clinical Society was held last Thursday. Mr. G. W. Ridley was elected president in place of Dr. J. W. Smith, and there was a numerous attendance of members. Mr. Black exhibited a patient after arthrectomy, and Dr. G. Murray, the hon. secretary, two cases of myxœdema, which had been satisfactorily treated by hypodermic injections of an extract of the thyroid gland of a sheep. Dr. Wm. Murray read a paper on "Our Mistakes," which gave rise to an interesting and instructive discussion.

Northern Counties Medical Golf Club.

A club has been formed here, under the above title, consisting of medical men only. Mr. W. G. Black is hon. secretary, and Mr. Adam Wilson first president. It will be remembered that in June last a match was played at Alnmouth between a team representing the Royal Colleges of Physicians and Surgeons of Edinburgh and medical golfers from the Newcastle district, the result, after a very close finish, being in favour of Edinburgh. It is expected that this match will become a yearly fixture, and our local medical golfers hope to win a victory for the north of England next time.

A Novel Qualification for a Surgical Post.

Mr. R. F. Cragg, M.B., was elected resident-surgeon to the Newcastle Workhouse Hospital last week. The contest was a very close one, and the guardians' voting being equal it was decided by the casting vote of the chairman. At this election an attempt was made to question the candidates as to their being teetotallers, but the chairman very properly objected to the question as not being pertinent to the election. It is felt that candidates for public appointments have already sufficient to put up with without an addition being made to their trouble.

Newcastle-on-Tyne, Nov. 4th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Edinburgh University General Council.

THE statutory half-yearly meeting of this body was held on Friday of last week. After putting on record an expression of the great loss the University had sustained by the death of its Chancellor (Lord President Inglis), the Council unanimously elected the Right Hon. Arthur James Balfour, M.P., to fill the vacant office. His election was proposed by the Emeritus Professor, Campbell Fraser, and seconded by Dr. Joseph Bell. Dr. Heron Watson and Dr. John Duncan were reappointed assessors in the University Court.

Edinburgh Medical Societies.

This month sees all the medical societies under weigh for their winter's work. The Pathological Club had its first meeting last week, and the Medico-Chirurgical Society holds its first meeting on Wednesday of this week. The latter is to confine the meeting to the valedictory address of the President (Professor Simpson) and to matters of business.

Health of Edinburgh.

The mortality last week was 64, making the death-rate

13 per 1000. Diseases of the chest accounted for 24 deaths, and zymotic diseases for 3. The intimations for the week were: cases of typhoid fever, 6; diphtheria, 3; scarlatina, 19; and measles, 2.

Nov. 3rd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Royal Academy of Medicine.

DR. SAMUEL GORDON, who has been President of the Royal Academy of Medicine for the past three sessions, gave a conversazione at the College of Physicians on Thursday last, which was numerously attended. In one of the smaller rooms Dr. McWeeney exhibited under the microscope bacilli of cholera, tuberculosis, diphtheria, and anthrax, and some harmless organisms found in the Vartry water. Dr. Cruise exhibited a rotatory apparatus for inducing the hypnotic sleep, and Messrs. Fannin a collection of surgical instruments. Some excellent glees were sung during the evening. Refreshments were served in one of the smaller rooms, and afterwards in the library. Dr. Gordon is succeeded in the presidency by Dr. George Kidd.

Maynooth College and Mr. Kenny, M.P.

Mr. Kenny, M.P., physician to Maynooth College, has been removed from office by order of the trustees, his alleged offence being "his pronouncements on several public occasions being grossly offensive to the clergy, and consequently unworthy of an officer of the great ecclesiastical college of Catholic Ireland." Mr. Kenny was a great friend of the late Mr. Parnell, and hence the dislike entertained for him by the trustees of Maynooth College. Mr. Kenny has published the correspondence between himself and the College, and has demanded a copy of the resolution of the trustees removing him from office, and has declined to accept as valid a dismissal unaccompanied by the authority from which alone it can derive validity.

Schools of Surgery, Royal College of Surgeons.

On Monday last Mr. H. G. Croly, President, distributed the various prizes obtained during the past session to the successful students. The prizes consisted of medals and cheques varying in value from £1 to £21. Miss Isabel Wantyn Harper distanced all competitors for the Barker anatomical prize of £21, her dissection being considered the best by the judges. Having alluded at some length to the late Mr. Corley, the President referred to the new buildings connected with the school, and contrasted the educational facilities and privileges now obtainable as compared with the time when he was a student. A vote of thanks to the President for his address, proposed by Mr. Carte, J.P., Vice-President, and seconded by Mr. Rawdon Macnamara, having been adopted, the proceedings terminated.

Royal University of Ireland.

A meeting of Convocation was held last week, presided over by the Vice-Chancellor. The report of the annual committee was mainly taken up with the expediency of securing to members of the University the privilege of making use of the University library and museum, and the question of the allocation of University Fellowships. Lord Emly, the chairman, stated that the matters alluded to had occupied the serious attention of the Committee of Convocation, and that they had drawn up a scheme which they proposed that day to submit to the Senate. The greatest secrecy has been inculcated, but I am informed that the following are the provisions of the proposed scheme. It is proposed to institute several Fellowships at a salary of £200 yearly, tenable for three years, to be competed for among the students of the Royal University by public competition, who, it is contemplated, will replace examiners when vacancies may occur.

Cork Hospital Saturday.

The financial condition of the majority of the Cork hospitals is not satisfactory, the contributions being extremely small as contrasted with the work done by these institutions. It has been suggested that a Saturday collection might be successful, and the subject has met with approval from influential members of the community. The mayor held a preliminary meeting last week, and a committee has been appointed to carry out the necessary details.

Death of a Centenarian.

Patrick Breen died in Castleisland Hospital last week at the advanced age of 108 years. Although always enjoying fair health for the past thirty years he had never slept in a bed, but on a chair near the fire.

A death from small-pox took place last week in Sligo—a child aged five months,—but there does not appear to be any other case in the town.

Dr. W. J. Gibson, of Clontarf, has been placed on the Commission of the Peace for the County Dublin.

Nov. 3rd.

PARIS.

(FROM OUR OWN CORRESPONDENTS.)

Bromides and their Therapeutic Action.

M. GERMAIN SÉE records some observations made on the action of bromide of strontium in affections of the stomach. The diuretic action of the salts of strontium noted by M. Laborde in the dog, was not ascertained in the human subject, but the gastric disturbances common to cardiac and renal affections were markedly ameliorated by their use, and it was this fact that led to his employing them in affections of the stomach. The quantity administered varied from half a drachm to one ounce, taken in divided doses at each of the three usual meals. Of thirty-two cases of gastric catarrh thus treated, an obvious improvement was noted in all, especially in the diminution of evolved gas. In six cases, in one of which there was troublesome vomiting, recovery appeared to be complete. In three other cases in which the lactate of strontium was tried, it produced no benefit, while the bromide did. He found the bromide of strontium useful in cases of epilepsy, in which affection the bromide of calcium was also beneficial. M. Féré confirms the good effect obtained by the bromide of strontium in gastric cases, and asserts that whenever a bromide is necessary this is more easily borne by an irritable stomach than the potassium salt. M. Féré has, moreover, made an extensive trial of it in epilepsy, in which it may be given in the same doses as bromide of potassium, for the therapeutic action of both salts is alike. As to the accumulation of bromides in the system after prolonged use, he finds post mortem that it is the liver and not the brain which gives the most evidence of this accumulation. The quantity of these salts capable of being thus retained is very considerable. As to the bromides predisposing to tuberculosis, as has been asserted, M. Féré, while seeing no confirmation of it in the human subject, found it otherwise in the lower animals. He took half-a-dozen guinea-pigs and put three of them through a prolonged course of bromide. Having then inoculated the six with tubercular culture, he found that those to which he had given the bromide succumbed much sooner than the others.

Experiments in Cancer Inoculation.

At a recent meeting of the Biological Society, M. Moran showed a white mouse which he had inoculated last June with some epitheliomatous matter taken from another source. Following the inoculation there appeared a small tumour, which remained stationary till the month of September, at which period the animal gave birth to some young ones. From this time forward the tumour increased rapidly in size. The same phenomena were observed in a second experiment. During the whole term of gestation the tumour remained stationary, increasing immediately after delivery. These facts would go to show that gestation retards the development of these growths.

Contagiousness of Tuberculosis.

Remarkable and striking evidence of the contagiousness of tuberculosis is recorded anew by M. Arthaud, who gave some noteworthy statistics and personal observations on this subject at the recent Congress on Tuberculosis. Of thirty-five workmen forming the major part of the *personnel* of the municipal electric works, he found thirty-two the subjects of tuberculosis. Four of these are known to have been tubercular previously to their admission to the works, but twenty-three have contracted the disease since being so employed. The period of incubation would appear to be about two months. M. Arthaud again directs attention to the extreme importance of this question of tubercular

contamination in workshops and habitations, of which the foregoing record furnishes additional proof.

Mortality in Various Callings.

According to M. Bertillon the most deadly of all callings is that of a cabman. He is generally alcoholic, and to this failing quite as much as to his constant exposure in all weathers is to be attributed his early demise. As might be expected, he most often succumbs to disease of the respiratory organs. Gamekeepers, on the other hand, have the lowest mortality. Stonemasons and haircutters present a high mortality, while miners, on the contrary, whose lot is often considered severe, have comparatively few physical troubles, and their mortality is low. Commercial pursuits are not conducive to longevity save, curiously enough, amongst grocers. As to professions, judges, magistrates, and clergymen are long lived; whilst amongst medical men the mortality is very great in country districts, and is not above the average in Paris. The mortality amongst the children of medical men is comparatively very low.

Surgeons judged by a Surgeon.

An amusing incident, at the expense of M. Despiès, the well-known member of Parliament and surgeon to the Charité Hospital, as well as the unflinching opponent of Lister and all his works, took place at a recent debate in the Chamber of Deputies. M. Pelleton, in the course of a speech, remarked that the *rôle* of the Government ought not to be like that of the patient who, suffering from an incurable malady, goes to consult a surgeon, but, arrived at the door, dare not enter.—M. Despiès: "That is often the best thing he could do."—M. Pelleton: "The honourable member is without doubt in a better position than anyone to know the danger one runs in seeking a consultation." (General hilarity.)—The President: "I beg of you, M. Despiès, to observe professional secrecy." (Renewed laughter.)

Paris, Nov. 3rd.

BERLIN.

(FROM OUR OWN CORRESPONDENT.)

Professor Virchow.

PROFESSOR VIRCHOW has published the following letter in the papers: "The expiry of my seventieth year has rejoiced my friends more than myself. Age, even when it does not make its full burden felt, hints at the need of resignation. My friends, however, resolved that I should once more enjoy on my birthday a general survey of my past life, my endeavours, my labours, my successes. And they have had their way. From almost all parts of the world the heartiest congratulations, from many splendid gifts, from not a few high—nay, the highest—honours have come to me. A series of festal days elapsed before I could even read all the letters and documents, and estimate the measure of the recognition and attachment dedicated to me. Playmates of my early youth, schoolfellows, fellow-labourers from all directions and countries, down to my youngest pupils in the laboratory, have appeared to congratulate me. It is impossible for me to thank each individual and each body as I should like, and to tell them how happy and honoured I feel that so much friendship, so much love, so much goodwill, still remain for me, and how much I wish that none of it may be lost during the remainder of my life. I trust I may be permitted to express my feelings in this general letter. Only one thing I will add. My friends may rest assured that their recognition will not corrupt my heart, and that I cherish no dearer hope than that I may be permitted to consecrate my powers yet awhile, as before, to the cause of science and mankind. Berlin, Oct. 25th, 1891.—RUDOLF VIRCHOW."

The Görbersdorf Hospital.

Dr. Sasaki of Tokio recently visited the hospital for pulmonary patients at the mountain village of Görbersdorf in Silesia. He examined all the arrangements with great care, with a view to founding a similar establishment in Japan.

Congress of Analytical Chemists.

The first International Congress of Chemists who make it their specialty to examine food and drink sat from the 10th to the 16th ult. in Vienna. It resolved that the sale of dietetic articles under deceptive names should be made penal, that an international Codex Alimentarius stating the nature of all aliments should be drawn up, that milk intended for children should be sterilised soon after milking, and that very definite instructions as to the quality of milk should be laid down. Professor Roesler of Klosterneuburg and Dr. Bein of Berlin advocated their proposal that medicinal wine should be required to contain at least sixty centigrammes of phosphoric acid per litre.

Nov. 3rd.

THE SERVICES.

Surgeon-Major J. J. Lamprey Medical Staff, has been appointed Medical Officer of the British Commission for the delimitation of the Anglo-French frontier on the West Coast of Africa.

ARMY MEDICAL STAFF.—Surgeon-Major Charles E. Harrison, M.B., F.R.C.S. Eng., Grenadier Guards, to be Brigade Surgeon-Lieutenant-Colonel, vice A. B. R. Myers, Scots Guards (dated Nov. 4th, 1891).

NAVAL MEDICAL SERVICE.—The following appointments have been made at the Admiralty:—Staff Surgeons: John Lyon, M.D., has been promoted to the rank of Fleet Surgeon in Her Majesty's Fleet (dated Oct. 20th, 1891); Thomas M. Sibbald to the *Howe* (dated Oct. 30th, 1891); James C. Dow to the *Champion* (dated Nov. 6th, 1891).—Surgeon: W. S. Lightfoot to the *Philomel*, and Henry Harries to the Royal Marines, Plymouth (both dated Nov. 10th, 1891); G. G. Borrett to the *Pheasant* (dated Nov. 6th, 1891); Evan St. M. Nepean to the *Herald* (dated Nov. 9th, 1891); Hugh G. Cowie, M.D., to be Surgeon and Agent for Pennant and Gardenstown (dated Oct. 31st, 1891).

VOLUNTEER CORPS.—*Artillery:* Surgeon and Surgeon-Major (ranking as Lieutenant-Colonel) J. Carmichael, M.D., resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Corps on his retirement (dated Nov. 4th, 1891).—*Rifle:* 3rd (Cambridgeshire) Volunteer Battalion, the Suffolk Regiment: Edward Henry Douty, M.B., to be Acting Surgeon (dated Nov. 4th, 1891).—2nd Volunteer Battalion, the Duke of Cambridge's Own (Middlesex Regiment): Honorary Assistant Surgeon C. A. Patten to be Surgeon (dated Nov. 4th, 1891).—4th Volunteer Battalion, the Gordon Highlanders: David Maver, M.B., to be Acting Surgeon (dated Nov. 4th, 1891).

VOLUNTEER MEDICAL STAFF CORPS.—Surgeon-Captain Julian Philip Swindell Hayes, Medical Staff, to be Adjutant, vice W. A. Morris, whose term of office has expired (dated Oct. 23rd, 1891).—The Leeds Division: Surgeon M. J. Oliver resigns his commission (dated Nov. 4th, 1891).—The Glasgow Division: James Gibson Graham, M.B., to be Acting Surgeon (dated Nov. 4th, 1891).

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE ANNUAL MEETING OF FELLOWS AND MEMBERS.

THE annual general meeting of the Fellows and Members of the Royal College of Surgeons was held in the hall of that institution on Thursday, the 5th inst. There was a very large attendance. The President, Mr. Thomas Bryant, occupied the chair. After the usual formalities,

Mr. JOSEPH SMITH moved the following resolution:—"1. That the Council of the College be and is hereby requested to take immediate steps to give effect to the resolution carried at the meeting of November 4th, 1886—namely: That in the opinion of this meeting it would conduce to the welfare of the Royal College of Surgeons, and would tend to promote the interests of medical polity and education, (1) if Members of the College were empowered to take part separately or conjointly with the Fellows in the election of members of the Council; (2) if Members of the College were eligible to sit on the Council, provided (*a*) that no Member of the College shall be entitled to vote until he have been such Member for a period of ten years; (*b*) that no Member of the College shall be eligible to sit on the Council till he have been such Member for a period of twenty years; (*c*) that not more than one-fourth of the Council shall consist of Members of the College who are not also Fellows." He said a similar resolution had been

frequently proposed on previous occasions, and had been passed almost unanimously by the Fellows and Members who attended. He thought it was a very moderate resolution, as they would be content to be represented on the Council by one-fourth of the total number of Members. He challenged the production of another instance where 15,000 Members belonging to a corporate body had no power to elect a Council, or to govern the action of those twenty-four gentlemen who had to manage the expenditure of the money connected with that institution. Individual members of the Council would not attempt to defend the position for a moment; they only did so in their corporate capacity. He thought it was a remnant of old times to find so many intelligent practitioners in this country positively boycotted and prevented from taking part in any of the deliberations of the College. He felt sure that modern legislation would speedily put an end to such a state of things.

Mr. CABLE seconded the resolution. He had thought that their requests should have been conceded long ere this. He considered that at the present day the interests of the general practitioners were entirely unrepresented on the Council. Not a single member of the Council had been in general practice, and could therefore know nothing of the wants of the general practitioner.

Mr. LAWSON TAIT remarked that he had been informed by the Secretary that a resolution proposing to have the minutes read and adopted and confirmed by the meeting in the due course of business, would not be allowed to be moved. The President had given his reason for not doing so by saying "that the meeting has been summoned for the purpose of receiving the report addressed to them by the Council." He doubted whether the Council and the President had the power strictly to define what should or should not be considered at an annual meeting of the Fellows and Members.

The PRESIDENT: Each meeting is complete in itself, and the minutes require no confirmation. The last meeting had nothing whatever to do with the present one.

Dr. R. GOODING thought that if the minutes had been properly reported for the last four or five years it would not have been necessary to propose the present resolution. This was not a meeting of the President, Vice-Presidents, and Council of that distinguished College. It struck him that the main business of those meetings should be conducted on business principles. It had been said, in London and the provinces, and throughout the world, that the twenty-four gentlemen representing the Council had from time to time considered themselves the College of Surgeons in England, and that the body corporate and politic were rather in the position of intruders, but that was not the opinion of the profession at large, and had not succeeded in gaining the *vox populi*.

Some conversation then ensued on the subject of the receiving and adopting of the report by the meeting. The President explained that the report had already been received by the meeting, but that it was not the function of the meeting to say whether they adopted it or not.

Mr. ELLIS asked what the object of the Council was in placing the report before the meeting.

The PRESIDENT: For your information, and to hear any remarks from you upon it that may help us in our work. The report is a very important one. There are the questions of education and of a scheme of examinations, and other matters of great importance, for your consideration.

Mr. GANT: But if we are not to adopt the report, how can you adopt our remarks upon it?

The PRESIDENT: We shall be only too pleased to get hints of any kind.

Mr. JOSEPH SMITH: It seems to me, as a business man, your ruling is quite contrary to anything I have heard before.

The PRESIDENT: Then your ears must have been very much closed. This meeting has no power whatever to adopt or alter any report that the Council of the College may lay before it. We are the executive of the College, and we are willing to alter the report if the Members and Fellows will bring forward any good reasons why we should do so. We wish you to help us by your experience and by your knowledge to make any alterations for the benefit of the profession; but the question of adoption is not before us, and it never has been.

Mr. NELSON HARDY asked whether, if the report was found to be seriously defective in any particular, it would be sufficient ground for referring it back to the Council.

The PRESIDENT thought they could not refer the report.

Mr. NELSON HARDY: The report purports to be a record of the work of the College, and not the work of the Council.

The PRESIDENT: Do not quibble, Mr. Nelson Hardy. It is not worthy of you.

Mr. LAWSON TAIT pointed out that all reference to one of the most important meetings held in this theatre was omitted from the report—that, namely, which dealt with the question of the new University. The meetings held by the Fellows and Members were an essential part of the College work, and that omission was a serious defect which should be rectified.

The PRESIDENT explained that this had not been introduced into the report because it had not come into the work of the Council during the past year.

Mr. ELLIS asked whether a motion requesting amendment of the report would be admissible.

The PRESIDENT: I rule it out of order.

Mr. LAWSON TAIT (emphatically): Then I would ask the President to produce the by-law by which he can give such a ruling.

The PRESIDENT: There is no by-law affecting that point.

Dr. GOODING wanted to know what had become of the minutes of the meeting referred to. They all knew the humble position in which the Council of this College was placed on that occasion, and he could quite well understand why the minutes had been omitted from that report. He submitted that they should refer back the report for amendment, and that a second meeting should be called to consider it in its amended form.

The PRESIDENT: It is perfectly out of your power to refer the report. I need hardly tell you what the effect of that would be. We all know very well the exact position in which you stand.

Mr. TAIT: We all know the position in which the Council stand.

The PRESIDENT: We will not bandy words, Mr. Tait. A resolution can be placed before the meeting in proper course.

Mr. Joseph Smith's resolution was then put to the meeting and carried, only one Member recording his dissent.

Mr. BRUCE CLARKE then moved: "That in view of the fact that the General Medical Council has invited the consideration of the Colleges of Physicians and Surgeons to the details of the scheme suggested for the fulfilment of the five years' curriculum recently recommended by the General Medical Council, and in view of the fact that a scheme emanating from the Council of this College has been submitted in print to the Fellows of the Royal College of Physicians without the Fellows of this College having been officially informed of the nature of the scheme, this meeting records its regret that on so important a matter the body corporate of this College was not consulted." He said that it was seven years ago since Mr. Swayne proposed a resolution that any matter connected with the constitution of the College should not be carried out without the accord of the body corporate. It had always seemed to him that all Fellows and Members should take up this position. He remembered the expression which had come from a former President who told them that many of the resolutions passed by the Council were inoperative. Every single resolution passed by the Fellows and Members had always been inoperative. No subject had come before the Fellows and Members of the College, whether it were a question of reform or of an additional charter, so important as the question with regard to education, because that interested practically everybody in connection with this College, especially the teachers, because they knew how much the student had to get up. It appealed to every individual member of the profession, for, although the vast majority of its members were engaged in the general practice of their profession, they had an opportunity of watching what the various effects of the examinations were on the new practitioners whom they see from time to time coming into their neighbourhood, and the vast majority of them had been under the impression, judging solely by results, that the results had not been satisfactory. They had hoped that the fifth year would be in the main devoted to clinical study. What were their feelings when they found that the schemes now proposed for dealing with this subject would give the student more work to do per year than he had with his four years' course. On such an important matter it would have been only reasonable that the body corporate should have been consulted. The College

of Surgeons might reasonably have followed the example set them by their sister College. There was very good reason why it should have been done on this occasion, because the scheme of education was entirely a novel one and had never been proposed by any licensing body in the United Kingdom. If the Council itself had been unanimous it might not have been worth while to consult the rest of the College, but it was notorious that not only were they not unanimous, but that there were three schemes before them. In the first scheme, the first examination was practically that which they had at present, with the addition of elementary biology; the second was much the same as it was at present; and the third also was much the same with the addition of public health. The second scheme embraced no less than four additional subjects of examination, and required a man to be examined twice in medicine and surgery, but only once in midwifery, either in the last examination but one or in his last examination. The third scheme was one which required five examinations. There was other evidence which showed a singular lack of unanimity. A deputation from the Association of Fellows met a deputation of the Council, and one of the members of the Council made a remark with reference to education. The deputation asked if the question of education had better not be referred to the whole body corporate, and they were told by that member that he did not wish to disparage the knowledge of his colleagues on the Council, and he did not think that he was in the least revealing secrets by saying that he very much doubted whether there were two members on the Council who really understood the system of medical education. He was not often in accord with the remarks that fell from that gentleman, but on this occasion he was. There were seven Colleges in the United Kingdom, and this was the only one in which at least some portion of the body corporate was not consulted on a question of importance of this kind. Take the University of Cambridge. Only a week ago they had to decide a most momentous question of whether Greek was to be retained in examinations for their degree. Did the Council of the University decide it? Did even the resident teachers decide it? They appealed to every graduate to come and record his vote upon this subject, and by that vote they were determined to abide by the Greek. He felt it would be of immense advantage to all concerned if the body corporate were consulted on points of importance.

Mr. JABEZ HOGG seconded the motion. He thought the Council merely called them to assist at a function, for it could not properly be called a public meeting.

The PRESIDENT said: The great object of the present meeting is to consider the report, and not to deal with all the side issues that have crept up. Mr. Clarke has found fault with the Council because they had not called the Members and Fellows to consider the question of education, and he somewhat unfairly—certainly unkindly—criticised some remarks that had been made about the Council. The remark made at the time by my distinguished colleague certainly has no such bearing or reference as Mr. Clarke has given to it. We, as members of the Council, may fairly claim to have some knowledge or something to do with the educational matters of the country. We say now that we should have been glad of the opinions of certain of the Fellows if it had been in our power to ask them; but you know very well that during the trial which is now going on, in which you are asserting your rights, it was not expedient for us to do other than what our lawyers tell us we might do, and what we probably might have done a long time ago had your action been different. And I might say that the foolish threats that we have heard to-night have no influence upon the Council, or good, or upon the communications between us on such occasions as this. We come here with every good feeling to the Fellows and Members, and on occasions like the present we hoped to get some good honest criticism about the scheme. We might express some regret that we have not had this criticism on the most important part of the report, for I may tell you the position of this report: it has not passed this College. It is under consideration, and we have drawn up a certain statement which is embodied here, and which we believe to be the best. The College of Physicians considered their scheme in consultation with their Fellows, because that is their way. But could we call this meeting a consultation with Fellows and Members? It is perfectly ludicrous. Has there been any criticism that we could weigh? Why, a scheme like this, involving so many complicated interests, requires calm and careful consideration. It has been open to criticism; and when we assemble with the College of Physicians, to again consider the scheme we shall propound, then the thing will be settled. Our position turns very much upon the lines of the legal proceedings which you, gentlemen, have thought it right to take against us.

Mr. NELSON HARDY proposed, and Mr. DICKINSON seconded, a resolution referring the report back to the Council, with a request that they should remedy the defects contained therein—namely, the omission from the professed report of the work of the College any mention of the meeting held on May 11th on the new University question. This the President characterised as an "extremely offensive motion."

Mr. TWEEDY moved as an amendment that the Council be hereby requested to supply the omission in the present report of the meeting of May 11th. On being put to the vote, the amendment was lost, and the original motion was adopted.

Mr. EDRIDGE GREEN moved, and Mr. GEORGE BROWN seconded, a motion requesting the Council to forward a copy of the report to each Fellow and Member a fortnight before each annual meeting. This was carried.

Mr. LAWSON TAIT proposed a vote of thanks to the President for his conduct in the chair. He hoped that on reflection the President would dismiss from his mind the idea of the last resolution as being meant offensively by those who had voted for it. The President's courtesy in the chair was unbounded. He combined the qualities of a distinguished surgeon and a gentlemanly man.

The PRESIDENT briefly replied, and the meeting then separated.

METROPOLITAN ASYLUMS BOARD.

Return of Patients remaining in the several Fever Hospitals of the Board at Midnight on November 3rd, 1891.

Hospital.	Beds occupied.						Total accommodation.
	Scarlet fever.	Diphtheria.	Typhus fever.	Enteric fever.	Other diseases.	Total.	
Eastern Hospital	291	84	1	25	..	301	442
North-Western Hospital	308	57	..	21	2	388	412
Western ,,	117	20	..	4	2	143	224
South-Western ,,	157	21	..	47	3	228	340
South-Eastern ,,	195	16	4	110	3	328	449
Northern ,,	351	30	..	24	...	405	480
Totals	1339	178	5	271	10	1793	2355

THE SCIENTIFIC TRAINING OF VETERINARY STUDENTS.—On Oct. 1st the session of the Royal Veterinary College was opened with an introductory lecture by Professor Brown, C.B. Professor Crookshank, a governor of the College, occupied the chair. After the lecture, in the course of his remarks, Professor Crookshank advocated the still higher education of the veterinary student, requiring a longer period of study and reform in the system of examination. A good deal was heard in regard to the diminution of the number of "passes," and there had been a tendency to consider that the fault lay entirely with the students. He was very strongly of opinion that a good deal of reform was necessary in the system of examination. The governors had heard with great regret of some lack of enthusiasm in the dissecting-room, but that too could be remedied by reform in the system of examination. He could not help looking forward to the day when the Royal Veterinary College of London would be more widely recognised as a great teaching school, not only attracting students from all parts of the empire, but having such fame that the students of other nations would not consider their education complete until they had seen something of the practice and training of the veterinary school of the largest city in the world.

Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen having conformed to the by-laws and regulations, and passed the required examinations, were at a meeting of the College on Oct. 29th admitted Licentiates:

Addison, C., St. Bartholomew's.
Allan, Edward B., Univ. College.
Aston, Richard Henry, Leeds.
Badger, Arthur R., St. Barthol.
*Baldock, Edward Henry, Guy's.
Barlow, Henry Goodeve, Bristol.
Barry, Cecil C. S., St. George's.
Bartlett, R. C., University Coll.
Bell, Arthur S. G., Westminster.
Bishop, Henry Draper, London.
Blick, Graham T. B., St. Mary's.
Boon, Ernest Gerald, St. Mary's.
Bridges, Ernest C., St. Barthol.
Buckley, Joseph R., Manchester.
Buxton, Gurney W., St. Barthol.
Byles, John B., Westminster.
Cameron, A. G. R., St. Mary's.
Caporn, Albert W., St. Thomas's.
Chambers, A. J., Univ. College.
Chichester, Edward, London.
Clarke, Geo. Gilbert, St. Mary's.
Clegg, John Gray, Manchester.
Cobb, Wm. Ernest S., Guy's.
Cooper, Jas., St. Bartholomew's.
Corby, Henry, London.
Covernton, Hugh S., Middlesex.
Crick, Alfred, St. Thomas's.
Crooke, William, Liverpool.
Cullinan, Edward, Westminster.
Cutler, Lennard, St. George's.
*Darabsheth, B. B., Bombay.
Daldy, Arthur Mantell, Guy's.
Davies, H. O., St. Bartholomew's.
Dempster, J. H., King's College.
Drake-Brockman, V. G., Middx.
*Edlin, H. Ebenezer, Manchester.
Fisher, John H., St. Thomas's.
French, Robert Houle, London.
Gabbett, P. C., St. Thomas's.
Gange, F. W., University Coll.
Garrard, George, St. Mary's.
Gervis, Arthur F., St. Thomas's.
Gibson, Henry Wilks, Middlesex.
Gillett, George Edward, London.
Godson, John E., Birmingham.
Green, Arthur R., Birmingham.
Guinand, Paul, University Coll.
Hamilton, Edward T. E., Guy's.
Higgs, E. W. M., Charing-cross.
Hillier, R. J., St. Bartholomew's.
Hings, Henry Alex., St. George's.
Hinks, Alfred G., St. Mary's.
Hirsch, Chas. T. W., London.
*How, Arthur B., St. Thomas's.
Hudson, Arthur Byrn, Guy's.
Hughes, David A., Middlesex.
*Jeffreys, John P., St. Thomas's.
Jones, Evan, Middlesex.
*Knaggs, George John, Dublin.
Knipe, Geo. Fredk., Liverpool.
*Ladell, Mordaunt P., London.
Lang, E. J., Liverpool and Guy's.
Lindsay, H. S., St. Thomas's.
Lloyd, Thos. Edward, Middlesex.
Longhurst, B. W., King's Coll.
*Macartney, E. K., Univ. Coll.
Macpherson, W. H., St. George's.
*McCrea, Benj. H. E., London.
McFarlane, A. R., Middlesex.
Mallam, Wm. A., St. Mary's.
*Mantri, D. J., Bombay & London.
March, Geoffrey C., Manchester.
Marsden, R. W., Manchester.
Meadows, Arthur H., Guy's.
Meagher, Edwd. T., Manchester.
*Michels, Ernest, Berlin, Kiel, Würzburg.
Montgomery, W. P., Manchester.
Mortimer, E. F., Charing-cross.
Mortimore, J. A., St. Barthol.
Moxon, Chas. C., St. Thomas's.
Neal, James, Birmingham.
Neale, Benjamin G., Bristol.
Oldershaw, George, Liverpool.
Oliver, John P., Charing-cross.
Palmer, E. C., St. Bartholomew's.
Parsons, John Herbert, Bristol.
Pearse, Herbert Henry, London.
Perkins, Joseph J., Cambridge and St. Thomas's.
Perry, Sidney H., Birmingham.
Pollock, Charles Edward, Guy's.
*Popham, R. B., University Coll.
Preston, John Robert, London.
Pridham, Chas. F., St. Mary's.
Rawlinson, F. J., St. Barthol.
Reeve, W., St. Barthol. & Middx.
Rendle, A. C., St. Mary's.
Roberts, Frank Allan, Leeds.
Rochfort-Brown, H., St. Barthol.
Rockstro, F. B., Charing-cross.
Rodgers, R. I. C., Liverpool.
Rowbotham, H. B., Birmingham.
Rutherford, Geo. J., Middlesex.
Rutter, H. Llewellyn, London.
Shaw, Richard Holgate, Leeds.
Simpson, Henry, Cambridge and St. Thomas's.
Smith, Arthur H., Charing-cross.
Smith, H. Roubiliac, Univ. Coll.
Smith, J. S. K., Liverpool.
*Smith, R. G., St. Bartholomew's.
Smith, Sidney Colvin, Middlesex.
Stevenson, A. C., Univ. College.
Summerhayes, J. O., St. Mary's.
Sutton, Chas. F., Manchester.
Taylor, Tom Robinson, Guy's.
Thompson, Wm. Hartley, Leeds.
Tomlinson, Henry E., Leeds.
Turner, Reginald G., St. George's.
Waddington, Chas. E., Leeds.
Wainwright, W. L., St. Thomas's.
Wallace, C. S., St. Thomas's.
Watkins-Pitchford, Wilfred, St. Thomas's.
West, R. M., St. Bartholomew's.
Whitaker, Jas. S., Manchester.
Williams, Samuel, Univ. Coll.
Wood, W., Camb. & Manchester.

* Candidates who have not presented themselves under the Regulations of the Examining Board.

ROYAL UNIVERSITY OF IRELAND.—The following degrees were conferred last week by Lord Emly, Vice-President of the University:—

Doctor in Medicine.—Wm. Elliott, J. J. Griffin.
Master in Surgery.—Andrew Alex. Mitchell.
Master in Obstetrics.—James Cagney.
M.D., B.Ch., and B.A.O. Degrees.—Stephen R. Haworth.
M.B., B.Ch., and B.A.O. Degrees.—Katherine Marian Maguire, with First-class Honours: Wm. C. Sullivan, with Second-class Honours. Jeremiah Ambrose, Patrick Bennett, John J. Bourke, Richard K. Brown, Denis J. Collins, Michael Costello, Thomas H. Donovan, Robert Dudgeon, Frank Dunne, George Wm. Farley, Robert J. Gordon, Geo. S. Hart, Edwin Heegan, Hugh Turrettin Heron, Wm. J. Hughes, John Jamison, Daniel A. Leahy, Edwd. Montgomery, Timothy J. Murphy, Michael McCann, Hamilton Morton, Patrick J. O'Sullivan, James Priestly, Richard Torney, Michael Twomey, Louis Wheeler.
B. Ch. Degree.—William Usher.
Honours in Chemistry.—First Class: Alexander Burns, James Alex. Clarke.
Medical Degrees Examination, M.B., B. Ch., B.A.O.—Exhibitions: First Class, £40, Katharine Maguire (disqualified by standing). Second Class, £25, William C. Sullivan.
Honours.—First Class, Katharine Maguire. Second Class, William C. Sullivan.—Upper Pass Division: Richard K. Brown, Geo. S. Hart, Michael McCann, Hamilton Morton, P. O'Sullivan, Jas. Priestly.—Pass Division: Jeremiah Ambrose, Patrick Bennett, J. J. Bourke, D. J. Collins, M. J. Costello, Thomas H. Donovan, R. Dudgeon, Frank Dunne, G. W. Farley, R. Gordon, S. Haworth, Edwin Heegan, H. T. Heron, W. Hughes, J. Jamison, D. Leahy, E. Montgomery, T. J. Murphy, R. H. S. Torney, M. Toomey, L. Wheeler.
M.D. Degree Examination.—Wm. Elliott, John J. Griffin.
M.Ch. Degree Examination.—Andrew Mitchell.
B.Ch. Degree Examination.—William Usher.

ROYAL COLLEGES OF PHYSICIANS AND SURGEONS IN IRELAND: CONJOINT SCHEME.—The following candidates have passed the Third Professional Examination:—

W. H. Best, F. C. Bushman, C. R. Chichester, J. M. Clifford, C. R. Cowan, F. L. Flood, F. M. Golding M. A. Gordon, F. C. Harte, M. C. Jordan, W. H. Langley, P. F. Monahan, A. J. Moran, V. E. McDonagh, J. T. O'Brien, W. H. Parr, J. M. Redington, C. M. Richards, J. E. Rogers, R. R. Smith, J. A. Smullan, R. Waterfield, and Jenny Wynne.

ROYAL COLLEGE OF SURGEONS IN IRELAND: DIPLOMA IN PUBLIC HEALTH.—The following gentlemen, having passed the necessary examination, have been granted the Diploma in Public Health of the College:—

Drs. C. E. Brettingham (Taunton), J. C. Burkitt (Whitwick), J. Clare (Hanley), E. Magennis (Lurgan), E. Newell (Moville), J. F. Spaig (London), and F. E. Streeten (Swindon).

ST. VINCENT'S HOSPITAL, DUBLIN.—The following appointments have been made:—Resident physician: Dr. Thomas G. Stevens. Resident surgeon: Mr. Jno. A. Grady. Resident pupils: Messrs. Keane, Anderson, and Marnell.

THE CITY AND THE WATER-SUPPLY.—Reference was made in an article which appeared in THE LANCET of Oct. 17th to a project in which it was suggested to sink wells in various parts of the metropolis to a great depth into the huge basin of water which it is surmised must underlie the London clay. Last Tuesday, at a meeting of the City Commission of Sewers, Colonel Haywood, the engineer, reported that an artesian well in the Minories had recently been sunk an additional depth of 100 ft., making 450 ft. in all; and the result of three days' pumping, day and night, was to yield a daily supply of 50,000 gallons. The engineer suggested that a further depth of 100 feet should be sunk so as to provide for future contingencies. The water was not clear yet, but of its purity he had no reasonable doubt. In the discussion which followed Mr. Malthouse said he did not intend that the supply of water should be limited to the artisans' dwellings. That well might become an important factor in considering the value of the present water companies' undertakings. He had himself tasted the water, and it was to the taste quite pure.

BEQUESTS AND DONATIONS TO HOSPITALS.—Mr. Wm. Rowland of Gateshead-on-Tyne has handed a donation of £100 to the treasurer of the Salford Royal Hospital.—Mrs. Rodger of Glasgow has paid out of the estates of her brothers, Mr. David Smith and Mr. Francis Smith, £1500 each to the Royal Infirmary and Western Infirmary, Glasgow, and £1000 to the Victoria Infirmary, Glasgow.—Miss Thompson Nelson of Wigton bequeathed £1000 to the Cumberland Infirmary, £500 each to the Border Counties Home for Incurables and the Cumberland and Westmoreland Convalescent Institution.—Miss Janet Coats bequeathed £300 each to the Glasgow Royal Infirmary and the Edinburgh Royal Infirmary.—Mr. Wm. Smith, late of Islington, bequeathed £500 each to the Islington Dispensary and the Royal Hospital for Diseases of the Chest.—The workmen of Sir Wm. G. Armstrong, Mitchell, and Co., at Elswick, Newcastle-on-Tyne, have contributed £318 6*s.* 6*d.*, for the quarter ending Sept. 30th last, to the various local medical charities, of which £239 11*s.* 6*d.* was apportioned to the Royal Infirmary.—Mrs. Clara Park, late of Teddington, bequeathed four leasehold houses at Teddington to the Richmond Hospital, and several leasehold houses to the Dispensary, St. George's-road, opposite the Bethlehem Hospital.—Miss E. C. Villers-Wilkes, late of Edgbaston, bequeathed (free of legacy duty) £1000 each to the General Hospital and the General Dispensary, and £500 to the Children's Hospital, all of Birmingham.—Mr. Andrew H. Burton, late of Pollokshields, bequeathed £200 to the Victoria Infirmary, Glasgow.—The City of Dublin Hospital has received £200 under the will of the late Miss Marianne Leigh, in memory of her sister Arabella.—During the past summer £635 was received from visitors to Welbeck, and the Duke of Portland has appropriated this amount in gifts of £100 each to Nottingham, Derby, and Mansfield Hospitals, £50 to Buxton Hospital, and smaller sums to other institutions and charities.

ROYAL INSTITUTION OF GREAT BRITAIN.—Dr. D. Hack Tuke has been elected a member of the Institution.

THE COLLEGE OF STATE MEDICINE.—Dr. Allan Macfadyen, B.Sc. Edin., and Grocers' Research Scholar, has been appointed Professor of Bacteriology to the College, in the place of Dr. Klein, F.R.S., resigned.

MEDICAL MAYOR.—Mr. Charles Highett, M.R.C.P. Edin., of Field House, Montpelier, Bristol, has, in response to an urgent invitation, consented to accept the mayoralty of the city for the ensuing year.

PRESENTATION.—At the Inns of Court Hotel, London, on Saturday last, Mr. and Mrs. Hyde were presented with the following token of esteem: a large tray of solid silver with the following inscription:—"Presented to Samuel Hyde, Esq., L.R.C.P., M.R.C.S., &c., physician to the Peak Hydro-Thermal Institution and the Buxton Hydropathic Establishment, together with a silver-mounted dressing bag to Mrs. Hyde, by visitors and patients, as a token of esteem and regard on the completion of the tenth year of their connexion with the above institutions.—October 1891."

CLINICAL SOCIETY OF MANCHESTER.—The following gentlemen have been elected office-bearers for the ensuing session:—President: Dr. S. H. Owen. Vice-Presidents: Drs. S. Buckley and James Holmes. Treasurer: Dr. C. H Braddon. Librarian: Dr. J. F. Le Page. Auditors: Drs. R. W. Walsh and P. Ashworth. Secretaries: Drs. A. H. Griffith and H. Lund. Committee: Drs. W. Bain, E. S. Bishop, H. W. Boddy, J. C. Eames, J. Ferguson, A. Hurst, H. Hutton, A. Emrys-Jones, David Macneilage, W. Milligan, T. C. Railton, C. G. L. Skinner, F. A. Southam, A. Wahltuch, and H. W. Wise.

ST. GEORGE'S HOSPITAL.—The following Scholarships, &c., have recently been awarded:—£125 Scholarship, H. M. Cooper; £65 Scholarship, F. C. Bottomley; £65 Scholarship, F. R. Kempson; £50 Scholarship, J. M. Manning. Henry Charles Johnson Prize in Anatomy: A. F. Goldsmith. Pollock Prize in Physiology: G. R. Baldwin. Treasurer's Prize: R. G. Turner. William Brown £40 Exhibition, Brackenbury Prize in Surgery, and the Thompson Medal: C. C. S Barry. Brackenbury Prize in Medicine: W. H Cooke. Sir Charles Clarke's Prize: G. F. Morley. General Proficiency Prizes: 1st year, E L Hunt; 2nd year, G. A. Clarkson; 3rd year, H. S Elliott.

NOTTINGHAM GENERAL HOSPITAL.—The one hundred and ninth anniversary of this institution was held last week at the Shire Hall. Lord Manvers took the chair at a short meeting of the governors before proceeding to St. Mary's Church, where the annual sermon was preached by the Bishop of Derry. On returning from the church the report of the board was read by the secretary and adopted. Thanks were accorded to the bishop for his sermon. A resolution was carried regretting the resignation of Mr. Joseph Littlewood, the honorary surgeon to the hospital, and in recognition of his valuable services to the charity during twenty-five years he was elected consulting surgeon and honorary medical governor for life.

ROYAL ACADEMY OF MEDICINE IN IRELAND.—The following office-bearers have been elected:—President: G. H. Kidd. General Secretary: W. Thomson. Secretary for Foreign Correspondence: J. Moore. *Medicine.*—President: J. M. Finny. Council: W. Beatty, J. H. Benson, M. A. Boyd, E. McD. Cosgrave, R. Hayes, J. Moore, A. N. Montgomery, J. Molony, Walter G. Smith, and H. C. Tweedy. *Surgery.*—President: H. Gray Croly. Council: J. R. Barton, Kendal Franks, R. Hamilton, T. Myles, E. Stamer O'Grady, Sir W. Stokes, W. T. Stoker, W. Stoker, R. L Swan, and W. J. Wheeler. *Obstetrics.*—President: A. J. Horne. Council: L. Atthill, W. S. Bagot, R. H. Fleming, F. Kidd, J. Lane, S. Mason, A. Macan, T. Madden, A. Smith, and W. J. Smyly. *Pathology.*—President: C. J. Nixon. Council: A. Baker, A H. Benson, H. Bewley, C. Coppinger, E. J. McWeeney, T. Myles, R Patterson, J. Purser, J. A. Scott, and J. B. Story. *Anatomy and Physiology.*—President: H. Broomfield. Council: J. Barton, A. Birmingham, H. Brooks, D. Cunningham, H. Earl, and F. A. Nixon. *State Medicine.*—President: E. Cosgrave. Council: T. Donnelly, Ninian Falkiner, A. W. Foot, T. Grimshaw, J. Moore, and Anthony Roche.

BRISTOL MEDICAL SCHOOL.—The annual dinner of the Bristol Medical School was held on Saturday, 31st ult., Mr. J. Paul Bush in the chair. There was a large attendance of students.

FOOTBALL CASUALTIES.—At Holbeach, Lincolnshire, a local football player, whilst engaged in a match on Saturday, sustained a fracture of the leg.—A young man, while playing in a football match, on Saturday, at Worksop, sustained a fracture of his left leg.

GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.—Office-bearers for the session 1891–1892:—Hon. President: Sir Spencer Wells, Bart. President: G. Halket, M.D. Vice-presidents: Robert Pollok, M.D., G. A. Turner, M.D. Treasurer: Alex. Miller, L.R.C.P.E Secretary: J. Nigel Stark, M.B. Reporting secretary: Robert Jardine, M.D. Pathologist: A. Milroy, M.D. Council: T. Richmond, L.R.C.P.E., Robert Kirk, M.D., H. St. Clair Gray, M.D., E. H. L. Oliphant, M.D., J. Carlyle, M.D., and M. Black, M.D.

ST. BARTHOLOMEW'S HOSPITAL AND SIR SYDNEY WATERLOW.—In recognition of his services to the hospital as the treasurer for a long course of years, the governors of St. Bartholomew's Hospital have subscribed for a portrait of Sir Sydney Waterlow, to be hung in the board-room. The portrait was formally unveiled by the Prince of Wales on Thursday, the 5th inst. His Royal Highness, after reviewing the improvements which had been effected in the institution during the treasurership of Sir Sydney, expressed his gratification at presiding on the occasion, and presented the portrait in the name of the subscribers.

ST. GEORGE'S HOSPITAL GRAPHIC SOCIETY.—This society, which was formed under the presidency of the late Sir Prescott Hewett, Bart., for the encouragement of painting, sketching, and photography among its members, opened its annual exhibition in the board-room of the hospital on Nov. 3rd. Through the kindness of Miss Prescott Hewett a number of the late baronet's beautiful landscapes were exhibited and greatly admired. Perhaps the most interesting photographs shown were the splendid bromide enlargements of Swiss mountain scenery exhibited by Mr. Dent, surgeon to the hospital and president of the Alpine Club. The exhibition will remain open during the present week.

LEPROSY AT BOKHARA.—The Emir of Bokhara has, it is stated, had several consultations lately with Russian medical men with regard to the prevalence of leprosy in his dominions, especially in the north eastern quarter of the town of Bokhara, called Gonzari Pissiane, which is, it is alleged, the hotbed of leprosy in Central Asia. The lepers lead there an independent life, are allowed to contract marriages, and no supervision, medical or other, is exercised over them. The result of these consultations is that the Emir has decided upon the foundation of a special hospital for the lepers, who will be treated by experts in the disease, and he, moreover, intends to order the complete segregation of these sufferers, with the view of preventing the spread of the disease.

MEDICAL OFFICER OF HEALTH, EASTBOURNE.—The following resolution has been unanimously passed by the sanitary committee and by the Town Council of the borough of Eastbourne:—"That the committee desire to place on record their appreciation of the excellent service rendered by Dr. Fussell for so many years, as well under the Local Board as under the Corporation, and, further, that it is only in consequence of the increase in the population of the town that revised arrangements are necessary." Dr. Fussell has been for nearly eighteen years medical officer of health for the larger portion of East, and a small district of West, Sussex, including Eastbourne, Newhaven, and Hailsham, fifteen sanitary authorities. During the whole of this period he has worked in perfect harmony with, and to the entire satisfaction of, his several boards. He has had also, we may assume, the entire approval of the Local Government Board. For the first few years of his tenure of office he retained the appointment of physician to the Sussex County Hospital. He was the first medical officer of health at Eastbourne, which then contained 11,000 inhabitants. It now contains about 35,000, besides visitors. So large an increase in the population now demands the appointment of a medical officer who shall devote his whole time to the sanitary service of the borough.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

ADAMSON, H. G., M.B. Lond., M.R.C.S., L.R.C.P., has been appointed House Surgeon to the Paddington-green Children's Hospital, vice H. L. Lack.

ASTLES, H. E., M.D. St. And., F.R.C.P. Edin., L.F.P.S. Glasg., has been appointed a Physician to the Melbourne Hospital, Victoria, Australia.

BOYD, J. D., M.B., C.M., L.F.P.S. Glasg., L.R.C.P. Edin., has been appointed a Physician to the Melbourne Hospital, Victoria, Australia.

CHALLENOR, H. S., M.R.C.S., has been appointed Certifying Surgeon under the Factory and Workshops Act for Buntingford and District.

CRAGGS, ROBERT FRANCIS, M.B., B.S. Durh., has been appointed Resident Assistant Medical Officer to the Newcastle-on-Tyne Union, vice Dr. Bowlan, resigned.

FITZ-GERALD, T. N., F.R.C.S. Irel., has been appointed a Surgeon to the Melbourne Hospital, Victoria, Australia.

HAY, WM. PEACH, M.B., C.M., Clinical Assistant to the Dundee Royal Asylum, has been appointed Medical Assistant to the Inverness District Asylum.

HUTTON, J. A., M.B., B.S., M.R.C.S., L.R.C.P., L.S Sc., has been appointed Medical Referee to the Star Life Assurance Company for Scarborough and District.

JARDINE, ROBERT, M.D. Edin., M.R.C.S., has been appointed Assistant Physician to the Glasgow Medical Mission Dispensary, Moncur-street.

LITTLEWOOD, JOSEPH, M.R.C.S., L.M., has been appointed Consulting Surgeon and Honorary Medical Governor for life of the Nottingham General Hospital.

LOWSON, D., M.D., C.M., has been appointed Surgeon to the Hull Orthopædic Hospital.

LUND, HERBERT, M.B., B.C. Camb., F.R.C.S., has been appointed Assistant Surgeon to the Royal Hospital, Salford, vice Stocks, resigned.

MASSON, G. BLAKE, L.R.C.P., L.R.C.S. Edin., has been appointed Medical Officer for the Convalescent Home at Ramsgate, vice Masters, resigned.

MILNER, EDMUND T., M.B. Oxon., M.R.C.S., has been appointed Honorary Assistant Surgeon to the Royal Hospital, Salford, vice Lund.

MOORE, W. F., L.R.C.P. Edin., has been appointed a Surgeon to the Melbourne Hospital, Victoria, Australia.

NIHILL, J. E., M.B. Durh., L.R.C.P. Lond., M.R.C.S., has been appointed a Physician to the Melbourne Hospital, Victoria, Australia.

RAY, HENRY, M.D., M.B., C.M. Glasg., L.R.C.P., L.R.C.S. Edin., has been appointed a Surgeon to the Melbourne Hospital, Victoria, Australia.

RYAN, C. S., M.B., C.M. Edin., has been appointed a Surgeon to the Melbourne Hospital, Victoria, Australia.

SADLER, ERNEST A., M.B. Lond., M.R.C.S., has been appointed House Physician to the Queen's Hospital, Birmingham.

SHARMAN, HENRY, M.B. Lond., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the Hospital for Diseases of the Throat, Golden-square.

SHIELDS, C. J., F.R.C.S. & M. Eng., has been appointed a Surgeon to the Melbourne Hospital, Victoria, Australia.

SOUTTER, DAVID WRIGHT LUTHER, M.R.C.S., L.R.C.P. Lond., has been appointed Ophthalmic Assistant to King's College Hospital.

SOUTTER, MANSFIELD KNOX, M.R.C.S., L.R.C.P. Lond., has been appointed House Surgeon to King's College Hospital.

SPRINGTHORPE, J. W., M.R.C.P. Lond., has been appointed a Physician to the Melbourne Hospital, Victoria, Australia.

STIRLING, R. A., L.R.C.P., L.R.C.S. Edin., has been appointed a Surgeon to the Melbourne Hospital, Victoria, Australia.

TAYLOR, GEO., M.B., C.M. Aberd., has been appointed Medical Officer for the First (A) Sanitary District of the New Winchester Union.

TEMPLE, G. H., M.B., C.M. Edin., has been appointed Assistant Medical Officer for the Hope Hospital, Manchester.

WORLEY, PHILIP, L.R.C.P. Lond., M.R.C.S., has been appointed Honorary Medical Officer to the Penoleton Branch Dispensary, Salford Royal Hospital, vice Addy, resigned.

WRIGHT, J. H., M.B., C.M. Edin., has been appointed Medical Officer for the Kelso Burgh.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement.

ANDERSON'S COLLEGE MEDICAL SCHOOL, Glasgow.—Professorship of Zoology.

ANDERSON'S COLLEGE MEDICAL SCHOOL, Glasgow.—Professorship of Physics.

ANDERSON'S COLLEGE MEDICAL SCHOOL, Glasgow.—Lectureship on Mental Diseases.

ASHFORD FRIENDLY SOCIETIES' AND PUBLIC MEDICAL ASSOCIATION.—Medical Officer. Salary £150 per annum, and residence. (Apply to the Secretary, Christchurch-road, South Ashford, Ashford, Kent.)

ASYLUM FOR IDIOTS, Earlswood, Redhill, Surrey.—Assistant Medical Officer. Salary £150 a year, with board and washing.

BERKS ASYLUM, Moulsford, Wallingford.—Assistant Medical Officer. Salary £100 a year, rising £10 annually up to £120, with furnished apartments, board, &c., and washing.

BRIGHTON THROAT AND EAR HOSPITAL, 23, Queen's-road, Brighton.—Non-resident House Surgeon. Salary at the rate of £50 per annum.

CLAYTON HOSPITAL AND WAKEFIELD GENERAL DISPENSARY.—Junior House Surgeon. Honorarium £25 per annum, with board, lodging, and washing.

CHESTER GENERAL INFIRMARY.—Visiting Surgeon for two years. Salary to commence at £80 per annum, with residence and maintenance in the house.

CHELTENHAM GENERAL HOSPITAL.—Junior House Surgeon. Salary £40 per annum, with board and apartments.

CITY OF LONDON LUNATIC ASYLUM, Stone, near Dartford, Kent.—Assistant Medical Officer. Salary £120 per annum, with furnished apartments, board, attendance, and laundry. (Apply to Mr. H. F. Youle, Guildhall, London, E.C.)

COUNTY BOROUGH OF BIRKENHEAD.—Medical Officer of Health for the Borough. Salary offered at the rate of £400 a year. (Apply to the Town Clerk, Town Hall, Birkenhead.)

DUDLEY DISPENSARY.—Resident Medical Officer. Salary £130, with increase at end of twelve months if services satisfactory. Good house (furnished, except beds and bed and house linen), coals, gas, and water provided, and rates and taxes paid.

DUNDEE ROYAL LUNATIC ASYLUM.—Clinical Assistants. No salary. Board, residence, &c.

GARLANDS ASYLUM, Carlisle.—Junior Medical Assistant. Terms £80 a year, with board.

HAVERSTOCK-HILL AND MALDEN-ROAD PROVIDENT DISPENSARY, 132, Malden road, N.W.—Medical Officer.

INFIRMARY FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST, 26, Margaret-street, Cavendish square, W.—Honorary Surgeon.

INFIRMARY FOR CONSUMPTION AND DISEASES OF THE THROAT AND CHEST, 26, Margaret-street, Cavendish-square, W.—Honorary Visiting Physician.

LONDON HOSPITAL, Whitechapel-road, E.—Medical Registrarship. Salary at the rate of £100 per annum.

METROPOLITAN ASYLUMS BOARD—WESTERN FEVER HOSPITAL, Seagrove-road, Fulham, S.W.—Clinical Assistant for three months. Remuneration: Board, furnished apartments, and washing.

MR. GEORGE RAYNOR, 132, Cheapside, E.C.—Qualified young Medical Officer for the North-West Coast of Africa. Salary £80 first year, £100 second. Board and apartments provided. Passage paid out and home.

NORTH DEVON INFIRMARY, Barnstaple.—House Surgeon.

RADCLIFFE INFIRMARY, Oxford.—House Physician. Salary £80 a year, with board, lodging, and washing. Tenable for two years.

SHEFFIELD GENERAL INFIRMARY.—Assistant House Surgeon. Salary £80 per annum, with board, lodging, and washing. Appointment for three years only.

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.—Assistant House Surgeon. Salary £65, board, lodging, and washing.

SHEFFIELD PUBLIC HOSPITAL AND DISPENSARY.—House Surgeon. Salary £160 per annum.

ST. HELEN'S FRIENDLY SOCIETIES' MEDICAL AID ASSOCIATION.—Senior Medical Officer. Salary to commence at £160 per annum, with residence free; also additional fees for midwifery of 10s. 6d. in each case. Conveyance provided. (Apply to Mr. T. Crooks, Cowley Hill, St. Helen's, Lancashire.)

ST. THOMAS'S HOSPITAL, London.—Assistant Surgeon.

Births, Marriages, and Deaths.

BIRTHS.

BROWN.—On Oct. 28th, at 25, Northumberland-square, North Shields, the wife of W. H. Brown, B.A., M.R.C.S., of a son.

BUTCHER.—On Oct. 29th, at Clydesdale Villa, Windsor, the wife of W. Deane Butcher, M.R.C.S., of a son.

CROWE.—On Nov. 1st, at Foregate-street, Worcester, the wife of G. Wyndham Crowe, M.D., of a daughter.

GIDLEY-DERRY.—On Oct. 27th, at Bodmin, the wife of B. Gidley-Derry, M.R.C.S., L.R.C.P. Lond., of a son.

HUBBARD.—On Oct. 30th, at The Lawn, Diss, Norfolk, the wife of F. Edmund Hubbard, L.R.C.P. Lond., of a daughter.

JAMESON.—On Oct. 28th, at Churchfield House, Chigwell-row, Essex, the wife of Brigade-Surgeon Geo. Wm. Jameson, H.M.'s Indian Army, Retired, of a son.

LAVER.—On Oct. 30th, at Cemetery-road, Sheffield, the wife of Arthur H. Laver, M.R.C.S., of a daughter.

WHITCOMBE.—On Oct. 17th, at Earl's court-road, S.W., the wife of P. Percival Whitcombe, M.B. Lond., of a son.

MARRIAGES.

FISCHER—GOVAN.—On Oct. 6th, at Almora, North-West Provinces, India, Lewis Gordon Fischer, M.B., C.M. Edin., second son of the late Professor Fischer, of St. Andrews, to Frances Eleanor (Effie), third daughter of George M. Govan, M.D., Indian Medical Service (Retired).

KELLGREN—LOEFFLER.—On Oct. 24th, at the German Evangelical Church in Camberwell, Arvid Ludvig Kellgren, M.D. Edin., to Elisabeth Wilhelmine Henriette Loeffler, only daughter of Ludwig Loeffler, of Cedars-road, Clapham.

WIGGINS—GRAY.—On Oct. 28th, at St. Michael's, Chester-square, Charles Wiggins, M.R.C.S. Eng., L.R.C.P. Lond., son of Henry Wiggins, Esq., of Sydenham Park, to Brenda, the only daughter of George Gray, Esq., of Sydenham.

DEATHS.

KEELING.—On Oct. 29th, George Ratcliffe Keeling (Licentiate in Dental Surgery, Royal College of Surgeons of England), aged 69.

WOODMAN.—On Nov. 1st, at Turnpike-lane, Hornsey, John Dover Woodman, M.B., son of the late William Hedges Woodman, Crafton, Bucks.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

We cannot undertake to return MSS. not used.

ARTIFICIAL DESQUAMATION.

Miss Mary Wardell, of the Convalescent Home for Scarlet Fever bearing that name, asks the question whether all the various artificial methods adopted for hastening desquamation really remove the possibility of infective danger in the individual. May not slowness in peeling indicate that the system generally has not thrown off all remains of the dreaded germs? Are not the internal organs as fully charged with infection as the outer surface? The writer continues: "I think it would be of advantage if the public could have their attention more fully directed to the fact of infection existing elsewhere in the system rather than in the skin, on which all their efforts and energies are concentrated. I have known patients, in order to be 'passed,' make wounds by picking, scraping, and cutting themselves. To me it seems that if the completion of desquamation is an indication of the infectious stage being passed, there is little reason in the removal of the skin by artificial means."

J. S. C.—The question has of late been attracting much attention in Australia (see remarks by our correspondent in his letters, THE LANCET, April 8th and Oct. 17th, 1891). We would refer our correspondent to the Australian medical journals for further details. It may be of interest to point out that more than seventy years ago yeast was employed by Dr. Stokes in "typhus" and other "low fevers" (see his Lectures on Fever), and was advocated by other physicians of that day, which was long prior to the recognition of typhoid as distinct from typhus fever.

H. E. W.—We think the matter purely legal, and our correspondent should be guided by his solicitor.

Etiquette.—Dr. H. is thanked for his letter. It does not alter the view which we have expressed.

M.D. Oxon.—The error was a misprint, and was corrected in the following week's issue.

HYPNOTIC EXHIBITIONS.

To the Editors of THE LANCET.

SIRS,—My name is mentioned by Dr. C. Lloyd Tuckey in your last issue as patronising the "Germane Hypnotic Entertainment." This is not so. I have always condemned the public use of mesmerism. I did attend a meeting *of medical men only*, as I was informed, and did investigate the results produced. But I was one who expressed the opinion "that the operator had done nothing new, and nothing valuable to the medical profession; that the performance of Mr. Germane would not be satisfactory unless he had skill enough to produce a state of insensibility in actual patients, or in some medical man present and known to us." He failed to try this experiment, and I left the meeting before any conclusion was arrived at by the committee.

I am, Sirs, yours faithfully,

Camden-road, N., Nov. 3rd, 1891. W. WYNN WESTCOTT, M.B.

THE HODGSON FUND.

To the Editors of THE LANCET.

SIRS,—Be good enough to acknowledge the following further sums received on account of the widow and children of the late J. W. Bacon Hodgson. I am, Sirs, yours faithfully,

J. PHILLIP TOPPING.

271, Romford-road, Forest-gate, Nov. 4th, 1891.

Dr. Leonard J. Kidd	..	£1	1	0	Dr. O. H. Fowler	.. ..	£2	2	0
A Friend	.. .. ..	1	1	0	Dr. T. Charlewood Turner		1	0	0
Dr. Felix Semon	.. ..	2	2	0	Dr. W. B. Cheadle	.. ..	1	1	0
Dr. Wm C. Arnison	..	1	1	0	Dr. C. J. Cullingworth	..	1	1	0
Dr. C. A. Ballance	.. ..	2	2	0	Dr. A. W. Benumont	..	1	1	0
Dr. C. R. Walker	.. ..	1	1	0					

UNQUALIFIED ASSISTANTS.

Clericus calls our attention to the evil of the employment of unqualified assistants by medical men. He considers it a growing evil, one damaging to the reputation of the profession, and that should be dealt with by the heads of it. On the other hand, the *Birmingham Daily Post* of the 29th ult. contains a letter signed "Hard Lines," defending the class of unqualified assistants as on the whole respectable and more capable than many qualified men.

Lucifer.—The Little Wanzer Reading Lamp may be had in two sizes at 4, Great Portland-street, W.

G. H. F. and *Lector* have forgotten to enclose their cards.

Ignoramus is undoubtedly right.

THE "FALSETTO" VOICE.

To the Editors of THE LANCET.

SIRS,—Will you permit me to call the attention of scientific men to an apparently unknown fact in connexion with voice production? This fact has to do with the so-called "falsetto" voice. The general opinion about this kind of voice is that it is something altogether unnatural, and that it ought never to be used. According to modern scientific theories, however, it is one of two or more registers, and is supposed to be intended by nature to be used only at the upper extremity of the vocal compass. But it is quite possible to produce this kind of voice at a very much lower pitch (at least an octave lower) than that at which singers are ever taught to use it. Produced in this way, it may be so weak and feeble as to seem practically useless. Still, it is possible so to produce it, as men singers well know. What they do not know, and what scientific men appear to be totally unaware of, is that it may be developed at this low pitch, and not only developed, but completely transformed. When thus transformed, it loses entirely its unnatural and effeminate character, and becomes a strong manly voice, which is easily mistaken for what is commonly called "chest-voice," but which, unlike that kind of voice, is capable of bearing throughout its whole compass any strain that may be put upon it. The transformation thus described I have more than once succeeded in effecting; and in the belief that it is of value and interest to the scientific as well as to the musical world, I ask permission to make the fact known.

I am, Sirs, yours obediently,

E. DAVIDSON PALMER, Mus.Bac. Oxon.

Highwood-road, N., Nov. 1891.

MEDICAL REGISTRATION.

To the Editors of THE LANCET.

SIRS,—My attention has been directed to a notice in THE LANCET, dated Oct. 31st, 1891, referring to the advantages of medical registration. Let me point out one very great disadvantage which recently came under my notice. I hold a certified reply from the Medical Council office to an inquiry respecting the registration of a gentleman keeping an open surgery and having on one end of his signboard "M.D. Jena," and on the other "M.D. Giessen." The certificate states that the party alluded to (I now make use of the words *verbatim* in parenthesis) "does not, and never did, appear on the Register." I then, for curiosity's sake, went to ascertain if this man had a deputy to sign his death certificates, as there can be no doubt they ought to require registration. To my surprise, I found his certificates quite valid, and entered in the registrar's book in the regular way, save with one exception, no name was added. Now, I cannot for a moment conceive why qualified assistants should register. There certainly is no benefit to accrue from it, as their certificate is quite as legal in death cases as any registered practitioner. I am, Sirs, yours truly,

J. NOBLE BREDON, L.R.C.S.I., &c.

Norton Folgate, E., Nov. 3rd, 1891.

A QUESTION OF CONTRACT.

To the Editors of THE LANCET.

SIRS,—If any members of the profession interested would give me advice on the case I am laying before you I should feel greatly obliged. About nine years ago I bought a share of this practice from B., and two years later purchased the whole. B. had, after three years' partnership, purchased the practice outright from W., who had covenanted not to practise during his life under a heavy penalty. Now, during the last few years, W. has been attending patients in my district, and to my detriment, but I cannot show that he has received fees. What shall I do? As it is a point of vital importance to many others in the profession, I hope some satisfactory answer may be given to

Yours truly,

November 3rd, 1891. M.R.C.S.

SURGEONS' POCKET CASES.

To the Editors of THE LANCET.

SIRS,—Our attention has just been drawn by a medical friend to a letter of Messrs. Salt and Sons appearing in your issue of the 17th ult. The gentleman who mentioned the matter showed us one of Messrs. Salt and Sons' cases, which he had had in use for many years. We were not previously aware that such a case had been made, but find that it is of a totally different construction—opens at the end instead of longitudinally, contains far fewer instruments, and is made of aluminium bronze, not of aluminium.—We are, Sirs, yours truly,

Lombard-street, E.C., Nov. 3rd, 1891. ALLEN AND HANBURYS.

TYPHUS FEVER AT BOLOGNA.

A PARAGRAPH in our columns last week announced the appearance of typhus fever in Boulogne. The name of the town, however, was, by an error in the telegram, misspelled, and should have been Bologna. Boulogne appears at the present time to be free from any serious epidemic.

SEWER VENTILATION.

To the Editors of THE LANCET.

SIRS,—On page 19 of the accompanying report you see it proposed to place manholes at a distance apart of 100 yards. Would you kindly inform me if that is the best method of ventilation in use, as I always understood it was not?—I am, Sirs, your obedient servant,

Grimsby, Oct. 15th, 1891. JNO. SPRING.

The method of ventilating sewers by means of manholes and lamp-holes at a distance of a hundred yards apart is that advocated by Sir Robert Rawlinson, who in 1878 revised the official "Suggestions" as to Main Sewerage, Drainage, and Water-supply. But the advice was coupled with the further injunction to provide similar means of ventilation at "dead ends," changes of gradient, and at junctions, and even then the advice was limited to "ordinary main sewer ventilation." In a number of towns the system has not been free from nuisance, and much question has arisen as to whether the system of ventilation or the construction of the sewers themselves was mostly at fault. The "Suggestions" we refer to are in many respects out of date; they cannot be regarded as fitted for universal adoption. But we do not know that Sir Robert Rawlinson's successors at the Local Government Board have issued any others.—ED. L.

"THE LOCUM TENENS."

To the Editors of THE LANCET.

SIRS,—*A propos* of the letter addressed to you under the above heading, and inserted in your last week's issue, wherein "A Principal" animadverts on the custom of second-class fare being charged—when, as he believes, the third-class is always travelled in—may I observe that "A Principal" quite ignores the fact of the "Locum" having to incur the expense of cab hire to and fro, and often, also, for the transfer of luggage from one line of rail to another, besides the usual tips to a principal's servants &c., and which the difference between second and third-class fares barely covers? So that a "Locum," even if he always travels third-class, under such circumstances is not only frequently out of pocket, but is scarcely reimbursed to the full those expenses to which I have referred. Moreover, should he be travelling by the Midland Railway, which has no second-class, he is then absolutely at a loss. "A Principal" must therefore perceive that there is an all-sufficient and justifiable reason for the charge of which he complains, and which is made on behalf of the locum tenens by the agent through whom a fully competent and thoroughly qualified man is generally engaged. I am, Sirs, very truly yours,

Nov. 3rd, 1891. FIAT JUSTITIA.

A CORRECTION.

To the Editors of THE LANCET.

SIRS,—In my letter in THE LANCET of last week there is a printer's error which I beg you will allow me to rectify. It was the late Mr. Alfred *Smee*, F.R.S., F.R.C.S., &c., and not "Lines," who was one of the first, if not the very first, to point out the great value of the electro-magnet in removing fragments of steel from the retina.

I am, Sirs, your obedient servant,

November, 1891. T. MADDEN STONE.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Althaus, London; Messrs. Arnold and Son, London; Messrs. S. V. Ainé and Co., London; Dr. Alderson, London; Dr. Ackerley, Ashburton; Dr. Burdon Sanderson, Oxford; Dr. Bloxall, Bath; Mr. J. N. Bredin, London; Mr. Blakesley, Leicester; Dr. E. Blake, London; Mr. G. Brown, London; Mr. Brereton, Newport; Mr. F. P. Bush, Bristol; Mr. Bunton, Galway; Mr. Birchall, Liverpool; Mr. Brimmer, Clapham; Dr. Cagney, London; Mr. Cochrane, Kirkcowan; Mr. Watson Cheyne, London; Dr. Cambridge, Iowa, U.S.A.; Messrs. Cassell and Co., London; Mr. Clough, Leeds; Mr. Claremont; Messrs. Carnrick and Co., London; Mr. Cornish, London; Mr. Duke, Dublin; Dr. Dill, Belfast; Mr. R. Davy, London; Dr. Dale, Shanklin; Dr. Dudfield, London; Dr. C. L. Drew, London; Mr. Dames, London; Dr. Davies, London; Mr. Darville, Buntingford; Mr. Dobbs, Bungay; Mr. Downs, Uddington; Mr. Ellaby, Carlisle; Mr. Earl, Brighton; Messrs. Evans and Wormull; Mr. G. Foy, Dublin; Mrs. Fenwick, London; Mr. E. Frazer, Riverstown; Mr. Felgate, London; Dr. Foster, Pimlico; Mr. Forward, London; Mr. Garner, Preston; Mr. Grace; Messrs. Gale and Co., London; Dr. Handford, Nottingham; Mr. H. Hall, Junction City, Texas; Dr. Howard, Modesto, U.S.A.; Dr. C. L. Herman, Cape Town; Mr. Haines, Bristol; Dr. Hamilton, Kelso; Mr. Hornibrook, London; Mr. Harding, Whittlesea; Mr. Haysman; Dr. Hime, Bradford; Mr. Hamilton, London; Dr. Jardine, Glasgow; Mr. Johnson, Chester-le-Street; Dr. Kirk, Partick; Messrs. Krohne and Sesemann, London; Mr. Kidston, Glasgow; Mr. T. P. Lowe; Messrs. Lee and Martin, Birmingham; Mr. A. Leared, London; Messrs. Leader and Sons, Sheffield; Dr. Lyon, Bedford-park; Messrs. Ledger, Smith, and Co., London; Mr. Lockwood; Mr. Lawrence, Barnstaple; Mr. Hugh Lane, Bath; Mr. H. Lund, Manchester; Messrs. Merryweather and Sons, London; Dr. Marriott, Northampton; Messrs. Macmillan and Co., Canada; Mr. Matthews, Levenshulm; Dr. Munro, Middlesbro'; Dr. McMordie, Belfast; Miss Manning, Torquay; Mr. Macdonald, Glasgow; Miss Matteson, Winchcomb; Mr. Nicholson, Shepherd's Bush; Mr. A. E. Nevins, Hanley; Dr. Nicholson, Hull; Dr. T. Oliver, Newcastle-on-Tyne; Messrs. Oppenheimer, Sons, and Co., London; Mr. J. W. Potts, Sunderland; Mr. E. D. Palmer, London; Dr. C. S. Patterson, London; Mr. R. E. Phillips, London; Mr. Pentland, Edinburgh; Mr. T. P. Pick, London; Mr. Pike, Gloucester; Dr. J. Roche, Delgany; Dr. Ralfe, London; Messrs. Richardson and Co., Leicester; Mr. H. Sewill, London; Dr. Struthers, Edinburgh; Messrs. Sampson Low and Co., London; Mr. Sweeting, London; Dr. Savill; Mr. Greig Smith, Clifton; Mr. T. M. Stone, Wimbledon; Messrs. Street and Co., London; Mr. Sherring, Manchester; Dr. Thresh; Mr. Lawson Tait, Birmingham; Dr. Whipham; Miss Wardell, London; Dr. Wynn Westcott; Dr. T. Wise, Davos; Mr. Wheelhouse, Filey; Mr. Windle, Halifax; Lector; Clericus; J. S. C.; Fiat Justitia; Royal Lunatic Asylum, Dundee; T. A., London; M.R.C.S., London; *Western Daily Mercury* Co., Plymouth; Medicus, Bradford; International Gumming Machine Co., Bradford; Clerical, Medical, and General Life Assurance Society, London; W. B., Bridgewater; Nonentity, Kilburn; Brighton Throat and Ear Hospital; C. C. J., London; F., Swansea; Clayton Hospital, Wakefield; Experience, London; Corporation of Newcastle; Chester General Infirmary; Cheltenham General Hospital.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Dobbs, Halifax; Mr. Morgan, Oswestry; Mr. Sers, Peckham; Messrs. Lee and Nightingale, Liverpool; Mr. Verity, Richmond; Dr. Adam, West Malling; Sir H. Thompson; Mr. Lang, Somerset; Messrs. Christy and Co., London; Mr. Eyton-Jones, Barmouth; Mr. Norman, North Wales; Mr. Heatley, Bristol; Mr. Twyford, Hanley; Messrs. Riddle and Co., London; Mr. Heywood, Manchester; Messrs. Burroughs and Wellcome, London; Dr. Moorhead, Nottingham; Messrs. Powncsby and Co., London; Messrs. Maythorn, Biggleswade; Messrs. Hooper and Co., Pall Mall; Miss Walker, Hanover-square; Mr. Brown, North Shields; Dr. Thomas, Newport; Messrs. Roberts and Jones, North Wales; Mr. Garlick, Leeds; Dr. Morgan, Dublin; Messrs. Oliver and Boyd, Edinburgh; Mr. Wiglesworth, Ashford; Mr. Hodge, Newton Abbott; Mr. Gray, Leigh; Mr. J. B. Browne; Messrs. Watkins and Osmond, London; Dr. Johnson, Broughton; Dr. Powell, Beckenham; Mr. Barlow, Birmingham; Mr. Hughes, Boscombe; Mr. Christie, Liverpool; Mr. Brereton, Salop; Dr. Croke, Beverley; Mr. Mahony, Keighley; Mr. Stevenson, Glasgow; Dr. Tylecote, Staffs; Mr. Eade, Norwich; Mr. Williams, St. David's; Mr. Brockelbank, London; Mr. Harper, Barnstaple; Dr. Bryan, Thrapstone; Dr. Adams, Warrington; Mr. Everet, Pulborough; Dr. Edelstein; Mr. Vacher, Birkenhead; Mr. Purland, Woolwich; Mr. Hughes, London; Mr. Williams, Oxford; Mr. Cavendish, London; Mr. Wright, Notts; Mrs. Theobald, Leicester; Mr. Ockwell, Cricklade; Dr. Beale, London; Mr. Flather, Cambridge; Mr. Cole, Hartland; Mr. Welsh, Nantwich; Dr. Hanly, Desford; Mr. Stenhouse, Glasgow; Mr. Fiske, Dawlish; Mr. Thin, Edinburgh; Dr. Moorhead, Hucknall Torkard; Mr. Cochrane, Wigtonshire; Mrs. Hope, London; Mr. Swain, Hitchin; Mr. Armstrong, London; Miss Findge, London; Mr. Thrower, London; Mr. Johnston, Fulham-road; Dr. Taylor, Nottingham; Messrs. Keene and Ashwell, New Bond-street; Messrs. Culshaw, St. Helens; Dr. Waterhouse, Rotherham; Mr. Borrett, Portsmouth; Mr. Harman, Taunton; Medicus, Manchester; C. C. T., London; Mutual Life Assurance Society, London; G. A. B., London; H. T. M., London; Committee of Visitors, Garlands Asylum, Carlisle; Capital, London; University College, Liverpool; J. C. W., London; Ostler, Stanmore; Gresham Life Assurance Society, London; S. S. S., London; Secretary, York County Hospital; Secretary, Royal Infirmary, Liverpool; Bouillon Fleet Co., London; M.B., London; Secretary, Kent and Canterbury Hospital; E. B. H., London; Doctor, Liverpool; Secretary, Salford Royal Hospital; C. B., Boscombe; E. J., Weyton-super-Mare; High Shot House, Twickenham; Medicus, Cardiff; X., Bournemouth; M., Beckenham; E. F. R., Cheltenham; Medico, London; W. H., Liverpool; Physician, London; W. D. M., Dublin; W. T., London; A. B., London; Syntax, London; Forceps, London; A. Z., London; Oriel, London; Assistant, Liverpool; Hon. Sec., Lupus-street; Pinxton Coal Co., Derbyshire; Spes; A. K. O.; N. J.; M., Streatham.

NEWSPAPERS.—*Liverpool Mercury, Sussex Daily News, Nottingham Guardian, Liverpool Courier, North British Daily Mail, Birmingham Daily Post, Bristol Mercury, Manchester Guardian, The News, Yorkshire Post, Liverpool Daily Post, Leeds Mercury, Le Temps (Paris), Wit and Wisdom, Allgemeine Zeitung, Glasgow Herald, City Press, Scottish Leader, Dundee Advertiser, Sheffield Daily Telegraph, Newcastle Daily Chronicle, Reading Mercury, West Middlesex Standard, Windsor and Eton Gazette, Weekly Free Press and Aberdeen Herald, Local Government Chronicle, Mining Journal, Windsor and Eton Express, Surrey Advertiser, Hertfordshire Mercury, Sunday Times, Law Journal, Builder, Broad Arrow, West Middlesex Advertiser, Metropolitan, Chemist and Druggist, Architect, Saturday Review, Spectator, Birkenhead News, Cyclist, Insurance Record, Herald (London), Devon and Exeter Daily Gazette, Hastings News, Staffordshire Sentinel, Times of India, Hereford Mercury, Oxford Times, &c.*, have been received.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Nov. 5th, 1891.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Oct. 30	30·59	N.E.	44	42	78	50	42	..	Foggy
,, 31	30·60	E.	38	37	79	51	36	..	Foggy
Nov. 1	30·65	N.E.	50	49	71	50	49	..	Hazy
,, 2	30·56	N.E.	49	48	66	54	48	..	Hazy
,, 3	30·41	E.	46	44	61	52	42	..	Bright
,, 4	30·36	N.E.	48	46	69	53	45	..	Overcast
,, 5	30·61	N.E.	48	46	53	49	45	..	Cloudy

Medical Diary for the ensuing Week.

Monday, November 9.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Tuesday, Wednesday, Friday, and Saturday at the same hour.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations daily at 10 A.M.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

UNIVERSITY COLLEGE HOSPITAL.—Ear and Throat Department, 9 A.M.; Thursday, 9 A.M

LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Dr. Voelcker: Pathological Demonstration, Tuberculosis. No. 2.—Royal London Ophthalmic Hospital, Moorfields: 1 P.M., Mr. R. M. Gunn: Cataract.—Great Northern Central Hospital: 8 P.M., Dr. Galloway: Kidneys and Genito-urinary Tract.

MEDICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Burney Yeo: On the Conditions of Cure in Consumption.—Mr. Lockwood and Dr. Galloway: On two cases of Perforating Ulcer of the Duodenum in which Laparotomy was performed.

Tuesday, November 10.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.; Fridays and Saturdays at the same hour.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at same hour Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic operations, 4 P.M.; Friday, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2 P.M.; Saturday, 2 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M, Throat Department, Tuesdays and Fridays, 1.30 P.M. Electro-therapeutics, same day, 2 P.M.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars: 4 P.M. Mr. Jonathan Hutchinson: Cancerous Diseases of the Skin.—Bethlem Hospital: 2 P.M., Dr. Theo. B. Hyslop: General Paralysis of the Insane.

ROYAL COLLEGE OF PHYSICIANS (Examination Hall, The Savoy, W.C.)—5 P.M. Dr. Burdon Sanderson: The Progress of Discovery relating to the Origin and Nature of Infectious Diseases. (Croonian Lecture.)

THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Mr. J. F. J. Sykes: Objects and Methods of Inspection.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—Dr. W. H. Ransom: A case of Actinomycosis of the Vermiform Appendix causing Peri-typhlitis.—Dr. W. B. Ransom: A case of Actinomycosis of the Digestive and Urinary Tracts.—Mr. A. R. Anderson: A case of Actinomycosis of the Face and Neck; operation; cure.

Wednesday, November 11.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M. Operations by the Obstetric Physicians on Thursdays at 2 P.M.

CHARING-CROSS HOSPITAL.—Operations, 3 P.M., and on Thursday and Friday at the same hour.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M. Thursday & Saturday, same hour.

ST. PETER'S HOSPITAL, COVENT-GARDEN.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 1.30 P.M.; Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9.30 A.M. Surgical Visits on Wednesday and Saturday at 9.15 A.M

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. J. Mitchell Bruce: Phthisis of Unusual Types.—Royal London Ophthalmic Hospital: 8 P.M., Mr. A. Q. Silcock: Orbital Affections.

HUNTERIAN SOCIETY.—8.30 P.M. Clinical Evening. Dr. Cotman: A case of Unilateral Blushing and Profuse Sweating of Face produced during Mastication.—Dr. F. J. Smith: Amyotrophic Lateral Sclerosis.—Dr. A. T. Davies: Two cases of Graves' Disease.—Mr. J. Poland: Strangulated Inguinal Hernia with Hydrocele of Sac.

Thursday, November 12.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Surgical Consultations, Wednesday, 1.30 P.M. Ophthalmic Operations, Friday, 1.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Ear and Throat Department, 9 A.M

LONDON POST-GRADUATE COURSE.—Hospital for Sick Children, Great Ormond-st.: 4 P.M., Dr. Abercrombie: Demonstration of Cases. National Hospital for the Paralysed and Epileptic: 2 P.M., Dr. Gowers: Practical Illustrations of Diagnosis and Treatment.—London Throat Hospital, Great Portland-st.: 8 P.M., Mr. George Stoker: Paresis of the Larynx.

BRITISH GYNÆCOLOGICAL SOCIETY.—8.30 P.M. Mr. Th. W. Nunn: Maternal Conditions in relation to Congenital Syphilis.—Dr. Purcell: Shelling the Uterus per Vaginam in Malignant Disease. Report on Cirrhosis of Ovaries.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.—8.30 P.M. Patients and Card Specimens at 8 P.M. Dr. Beevor and Mr. Victor Horsley: A case of Traumatic Abscess of Left Angular Gyrus, with Crossed Amblyopia and Word Blindness, treated by operation.—Mr. Herbert Page: A case of Temporary Blindness in a Child following Fracture in the Occipital Region.—Mr. Jessop: On the Symptoms following Section of the Optic Nerves.—Mr. Holmes Spicer: Orbital Hæmorrhage occurring in Young People. Card Communications:—Mr. Kenneth Campbell: Unusual case of Rupture of the Choroid.—Mr. Johnson Taylor: Specimen of an Eye containing two distinct Sarcomatous Growths.—Mr. Sydney Stephenson: An Unusual Retinal Reflex.

Friday, November 13.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M

LONDON POST-GRADUATE COURSE.—Hospital for Consumption, Brompton: 4 P.M., Dr. J. Mitchell Bruce: Phthisis of Unusual Types—Bacteriological Laboratory, King's College: 11 A.M. to 1 P.M., Prof. Crookshank: Actinomycosis—the Ray Fungus in Fresh Specimens and in Sections.

THE SANITARY INSTITUTE (Parkes Museum, Margaret-st., W.).—8 P.M. Professor A. Bostock Hill: Trade Nuisances.

CLINICAL SOCIETY OF LONDON.—8.30 P.M. Dr. Churton: Case of Hæmorrhagic Pericarditis; repeated Aspiration; Recovery.—Dr. Herringham: A case in which a Right Aortic Arch passed behind the Œsophagus, and caused death by becoming dilated and slowly compressing the trachea.—Dr. Le Cronier Lancaster: Eight cases of Uræmic Eruption of the Skin.—Mr. C. Mansell Moullin: Two cases of Nephrotomy.

Saturday, November 14.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; and Skin Department, 9.15 A.M

LONDON POST-GRADUATE COURSE.—Bethlem Hospital: 11 A.M., Dr. Theo. B. Hyslop: General Paralysis of the Insane.

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